Re' ajlanik maaya ruch'ihil araaw, jenaj b'eeh reh ak' laj k'uhtanik, re' na rub'anariik pan qawii' eh pan kiib' wach q'orik

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Guatemala, 1999

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Re' rukamanjiik eh rehtesjiik xooj eloq wach ruuk' i kihoob' kilajeeb' taqe reh aj nahsil tinamit aj jun tar ha'.

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Peet Q'orik

Qeht'aliim chi re' i qak'alii (Guatemala) je' kikab' taqe qaka'jaa México, Honduras, re' taqe ye'aab' aha' inkimol wii' kiib' taqe tinamit qaa' qi'sil Maaya. Re' taqe qaa' qi'sil Maaya, nim wach i kina'ojb'al noq xwuktik cho kiwach, ruum i re' xkiraq chi riij nik' wach kib'ehel taqe nik' nimaal ink'utunik pan taxaaj, xkisik' eh xkireq wo' chi riij i tik, xkiraq chi riij i tz'aqooj je' wo' taqe ajlanik reh b'anb'al riij nik' nimaal wilik, xa re' la' i wilih xkahnik chi riij maj yohb'aal wach i k'axkiil xkik'ul cho.

Ruum i re' xch'ikib'jik cho wach i huuj wilih, reh rumolariik wach nik' nimaal i na'ojb'al wach kinaah i ajlanik eh b'anooj iij xkib'ehsaj cho wach pan kik'achariik taqe qamaam qati't, Maaya.

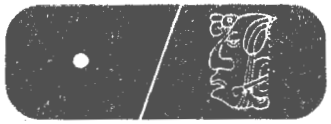
Re' huuj wilih ne' inkamanik reh hajwach iraaj ruraqam runa'ojb'al, je' rukab' xb'ehsjik cho wach najtir q'iij, je' rukab' wach kinaah taqe ajlab'al reh b'anb'al iij taqe xachih jarik.

Chu paam i huuj wilih re' ilool paam, ne rutik'aa' ruraqjiik runa'ojb'al wach kinaah taqe ajlanb'al Maaya, re' i wilik chi raa' oon tik'inb'al reh, re' i juninaq (20) ne' rutijej nik' wach intz'ihb'jik eh nik' wach kikojarik taqe ehtaal eh je' wo' ne' rub'an rutijiniik wach kinaah taqe i pajb'al kikojorik eh nik' wach i k'uht

ne' rub'an, ruuk' chih jarik ne ruk'uhtaaj taqe i wiiih chu paam taqe patb'aal reh tijinik, ruuk' i wilih k'ahchi'rub'ehsjiik wach i qawii'. Xa chi je' wiiih na qawih'iik chi korik maj mololkooj chi reh reh wach i qana'ojb'al, reh reh wach i qawii'.

Re' huuj wiiih na rukamaniik keh taqe inkaaj keht'aliim irukorkiil i qak'achariik je' wo' reh chi na qawih'iik pan suqkiil k'uxliis kuuk' taqe majaa' jenaj ta wach i kina'ojb'al ruuk' i qe hoj. Maj k'ahchi'ruye'jiik runimaal chi qawach taqe nik' nimaal iraaj jalarik chu paam taqe tijinik, je' rukab' xq'orjik cho noq xch'iklojik wach i q'orik chi kiwach taqe ajab'ees eh xkitz'ihb'aaj eh xkiyew rehtaal kib'ihnaal chu wach, pan 29 rub'ehel i poh marzo reh i haab' 1994 eh 29 ruq'ijel i poh diciembre reh i haab' 1996.

Peet Ch'uq
Ye'ooj kib'iral taqe q'orik pan ajlanb'al



Re' ajwaal wach chi na rutijiljiik:

Reht'eljiik chih kib'ihnaal taqe ju'jun chi ib'irel kikan chu paam i ajlanik Maaya eh Araaw.

Reht'eljiik nik' wach taqe ib'irel Maaya inq'orjik eh nik' je' rib'irel pan Araaw.

Tik'aab' reh.

Chu paam i qak'achariik chi kuk' xelek inqakoj taqe ajlanb'al xa pan chih jarik inqab'an, ru'uum ajik i re' re' reh ruraqjiik chi riij chi korik, ko ruman na qeht'aliim chih jarik inkaaj kiq'orom taqe ju'jun chi q'orik.

Yu'nah chi q'iij ayu' chu wach i qaye'aab' k'ahchi' chik iraaj ye'jik reh reh wach chi k'uhtunik, je' rukab' pan qawii' chik i k'ih ch'uht chi k'achareel, reh chi ne' kojwihik pan tuqkilal eh ne' inqanimej qiib' chi qunchelaal. Je' rukab' i wilih na ruk'amariik naah i ajlanb'al Maaya ruch'iil i keh Araaw.

Maj xq'orjik chik cho, reh chi na qareqam chi riij chi korik chih jarik i naqilom, ko ruman chi na qeht'aliim chih jarik inkaaj kiq'orom taqe ju'jun chi q'orik wilih.

• Ma' jenaj	Lajeeb' ho'kahliil reh ho'k'ahliii roxiq'ob'.	Ma' kjenaj
•• Jenaj		Tz'uhr
••• Lajtaqiil	Juninaqiil	Juuch'
•••• Ho'k'ahliil	Juniq'ob'iil	B'ehsb'al reh
—— Ho'k'ahliil roxiq'ob'	Wahxaqiib', ch'uyiil	Pan pa'lik
Lajtaq ho'k'ahliil roxiq'ob'	Junk'ilab'iil	Pan yoklik
	Kilab' chi k'ilab'iil	

Ma' jenaj.

Kiib' ruwii' rilariiik i ma' jenaj, na qab'anam, nik' wach je' chi keh aj Araaw eh nik' wach je' iraaj ruq'orom pan Maaya.

Re' ma' jenaj, keh araaw.

Qeht'aliim chi korik chi re' ma' jenaj, keh i araaw iraaj ruq'orom chi ma'xtah wilik, iraaj ruq'orom chi majaa'xtah. Pan ki'ajlanb'aal

Araaw, re' i ma'xtah je' wilih i rehtaliil = 0. Re' ehtaal wilih, xtihqik cho wach ku'uum taqe jenaj ch'uq chi tinamit "hindú" inq'orjik keh 450 eh 650 chi naah cho i rasb'aal i Kriisto.

Re' i rub'ihraal i ma'xta pan kaxlan q'orik *(cero)* inchaal cho ruuk' i q'orik "Ziffero" pan kiq'orb'al taqe aj Araaw iraaj ruq'orom 'xtah wilik chu paam. Re' re' iraaj ruq'orom qeh chi ma'xta tz'aaq eh inkojarik chu paam i ye'aab' noq ma'xtah i jenaj chu paam i ye'aab' re'.

Re' ma' jenaj, chu paam i na'ojb'aliil maaya.

Mi xqil i ma jenaj chu paam i na'ojb'aliil Maaya, ne' inqakoj rehtaal chi ayu' iraaj ruq'orom, tik'aab oon ch'ikaab' wach, re' wilih iraaj ruq'orom qeh chi noq majaa' kojpoon tah jenaj, wilik jenaj tik'inb'al reh, jenaj rutz'uhkriik. Je' wilih i rehtalil inkojorik: ⇐ .

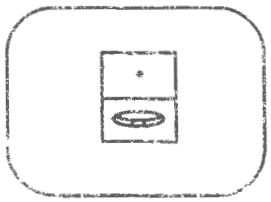
Inq'orjik cho chi najtir, je' wilih noq xwuktik cho wach i majaa' jenaj pan Maaya.

Re' peet je' wilih iruq'or: Re' Ma' Sylvanus Morley, irukoj chi xkorjik cho wach 353 haab' chi ri'sil cho i rasb'aal i Kriisto. Eh re' irukab', re' inkiq'or taqe sik'ol riij, chi re' majaa' jenaj xwuktik cho wach chi pam taqe haab' 1,500 xooj eloq 2,000 chi ri'sil cho i rasb'aal i Kriisto. Chi kiwach taqe ehtaal ab'aj xkahnik kahnoq kejeb' wach ehtaal i majaa' jenaj, pan Maaya, eh re' taqe i wilih:

Jenaj uhtz'ub'.
Jenaj ija'.
Jenaj pemech.
Re' ma' jenaj, ehtaal chu wach jenaj ab'aj.

Ne' rub'an ne inqakoj rehtaal chi re' ma' jenaj, pan Maaya ma' x'asjik ta rutkeel, maj rulachem riib' kuuk' taqe i kiye'aab' ehtaal inkamanik reh ajlanb'al, maj re' taqe ehtaal injalarik tz'aaq noq injalaaj i kiye'aab'.

Kajtz'u'k 1



Re' jenaj.

Nnoq inqil xa jenaj k'achareel oon xa chih jarik, re' ye'b'aal kehtaal i ju'jun chi xa chih pa' jariik, je' rukab' k'achareel qas qachaaq', chikop, on xachih jarik, reh reh wach i kitz'uhkriik cho, xa re' i jenaj wach keh, re' tiij i jenaj pan keh. Re' q'orik, jenaj inkojarik xa reh haj wach, xa re' la' ar ko qohkapab'inik k'isin oq chi riij. Mi xojkapab'inik chi riij i jenaj, chu paam i ajlab'al Araaw eh re' jenaj chu paam i ajlanb'al reh Maaya, ne inqil chi ma' jenaj tah wach iraaj ruq'orom.

Re' i jenaj, pan ki'ajlanb'aal taqe araaw.

Mi qakojom chik rehtaal chi re' raa' i ajlanik pan Araaw re' lajeeb'(iraaj ruqórom, pan lajtaq injahlik), ruum i re', re' ajlanik ink'amjik naah chi lajtaqiil, lajtaqiil maj belejeeb' taqe rujenajiil, maj noq kojpoon lajeeb' kohik'ik pa rukab' lok', re' i kiye'aab' taqe lajtaqiil.

Re' i jenaj, pan ajlanb'al maaya.

Je' rukab' i ajlanb'al Araaw wilik taqe rujenajiil, je' wo' re' i ajlanik pan Maaya, xa re' la', re' i raa' injalarik maj ayu' chi juninaqiil inb'ehik, re' wilih iraaj ruq'orom qeh chi wilkeeb' belejlaj rujenajiil, inq'orjik chi b'elejlaj maj noq inpoon juninaq, kohik'ik pa rukab' lok', chu paam i kiye'aab' taqe juninaq. Re' wilih iraaj ruq'orom qeh chi re' ajlanb'al Maaya injahlik chi juninaqiil.

Re' lajtaqiil.

Re' rukab' lok' iruye'aab' aha' inkimol wii' kiib' taqe aljanb'al chi lajtaqiil, kuuk' i wilih inkilaq'aa' koq kiib' taqe peet ajlanb'al, ruuk' i wilih injohtik naah eh inpoon junlaj, kab'laj, oxlaj... chi je' re', ko rehtaal inpoon juninaq on ki'ib' chi lajeeb'. Ayu' ma' na ta qatz'aa'm wach i ajlanb'al Maaya maj ma' re' ta chi lajtaqiil inb'ehsjik wach i ajlanik.

Re' ho'k'ahliil.

Re' ajlanik chi je' wilih, reh i Araaw. Re' i wilih re' i roox lok' iruye'aab', ayu' inkimol kiwach chi ho'k'ahliil oon lajeeb' chi ajlajtaq.

Lajk'ahliil roxiq'ob'.

Re' rukaaj lok' iruye'aab' pan ajlanik Araaw. Ru'uum i re' jenaj lajk'ahliil roxiq'ob' iraaj ruq'orom qeh chi wilik lajeeb' k'ahl roxiq'ob chi ju'jun chu paam on ho'k'ahl chi lajtaq, on lajeeb' chi ho'k'ahl. Xqamanaa' ta akoq ruuk' i wilih, re' taqe b'elejlaj rulajk'ahl roxiq'ob' i xiik' cho wii', ne' naq inponik ho'iq'ob', re' iraaj ruq'orom, ho'oob' iq'ob' chi ju'jun, lajeeb' k'ahl chi lajtaq, juninaq chi ho'k'ahl. Chi je' re' chi kok'taqiil ne' naq qoj'ooj eloq, lajk'ahl ruwahxaqiq'ob', lajk'ahl roxlajiq'ob', lajiq'ob', ho'lajuuj iq'ob'.

Lajeeb' pech rulajk'ahliil roxiq'ob'.

Re' roo' lok' iruye'aab' chu paam i ajlanb'al Araaw, Ruum i re', re' lajeeb' pech rulajk'ahliil roxiq'ob' je' wo' k'ihaal chi ju'junaal iraaj ruq'orom qeh, lajk'ahl roxiq'ob' chi lajtaq, hok'ahl chi ho'k'ahliil.

Ho'k'ahl pech rulajk'ahliil roxiq'ob'.

Re' i wilik pa ruwaaq lok', reh i ajlanb'al Araaw. Re' ho'k'ahl pech rulajk'ahliil roxiq'ob' wilik chu paam ho'k'ahl chi rulajk'ahliil

roxiq'ob' chi ju'junaal, lajeeb' chi rulajk'ahliil roxiq'ob' chi lajtaqiil, rulajk'ahl roxiq'ob' chi ho'k'ahl, ho'k'ahl chi rulajk'ahl roxiq'ob', eh chi je' re' chi kok'taqiil inpoon k'ilab' chi k'ilab'.

Re' juninaqiil.

Mi xakoj cho rehtaal chi chu paam i ajlanb'al araaw xojq'orik cho wach naah i lajeeb', ayu' chu paam i ajlanb'al Maaya na qaq'oriik wach naah i juninaq. Re' i juninaq chu paam i ajlanb'al Maaya, re' wilik ruye'aab' ku pan ruka'lok', eh chi ri'sil chik cho, xa b'elejlaj tiij inpoon. Re' wilih iraaj ruq'orom qeh chi re' ajlanik pan Maaya irujal riib' ku rehtaal inponik juninaq.

Juniq'ob'iil.

Chu paam i ajlanb'al Maaya re' roox lok' re' i kiye'aab' taqe i juniq'ob', re' wilik reh juniq'ob' i ju'jun on juninaq chi juninaq. Chu paam i Araaw ma'xtah i wilih.

Junch'uyiil.

Reh i ajlanb'al Maaya, re' i rukaaj lok' i ye'aab' iruchop naah i junch'uy, re' wilih wilik chu paam junch'uy chi ju'jun, juniq'ob' chi juninaq, eh juninaq chi juniq'ob'. Chu paam i Araaw ma'xtaj i wilih.

Junk'ilab'iil.

Chu paam i ajlanb'al Maaya re' i roo' lok' eh wilik reh junk'ilab' chi ju'jun, junch'uy chi juninaq, juniq'ob' chi juniq'ob', eh juninaq chi lajk'ahl rox'iq'ob'. Chu paam i araaw ma'xtah i wilih.

K'ilab' chi k'ilab'.

Re' kiye'aab' taqe ajlanb'al wilih pan Maaya re' ruwaaq lok' eh wilik reh junk'ilab' chi juninaq, junch'uy chi juniq'ob', juniq'ob' chi junch'uy, juninaq chi junk'ilab'. Qakoj rehtaal chi chu paam i ru'ajlanb'aal Araaw ma' ne' ta qaq'oriik wach naah i wilih.

Re' ma' jenaj.

Rehtaal ajlanik inkojarik pan ajlanb'al Araaw eh Maaya.

Tz'uhr.

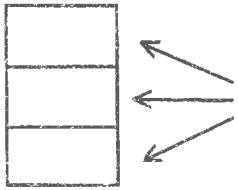
Rehtaal ajlanik inkojarik pan ajlanb'al Maaya.

Juuch'.

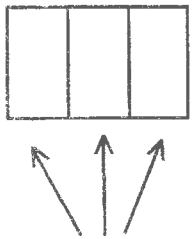
Rehtaal ajlanik inkojarik pan ajlanb'al Maaya.

Lok'iil.

Jenaj kajtz'u'k k'ih q'at paam eh inkojarik chi pa'lik, chi yoklik. Inkamanik reh kuhtb'al ajlanik pan Maaya eh Araaw.



Lok'iil pan pa'lik reh ajlanb'al Maaya.



Lok'iil pan pa'lik reh ajlanb'al pan Araaw.

Ehtaal pa'lik.

Re' i juuch' pa'lik, re' taqe i ju' jenaj intz'ehtenik pan taxaaj eh jenaj intz'ehtenik pan ak'al.

Ehtaal yoklil.

Re' juuch' on chih jarik iruk'am naah i ak'al, xaje' t'anlik wach naah.

Re' xq'orjik.

Mi xqakoj rehtaal chi ma' jenaj ta wach taqe ajlanik pan Araaw, ruuk' i Maaya, maj xaqil tiij i ma' jenaj, pan Araaw iruq'or qeh chi ma'xta wilik, eh pan Maaya iraaj ruq'orom tik'i'nik, ch'ikaab' johtoq reh i ajlanik.

Wilkeeb' woo aha' injalaaj wii', je' rukab' i kilok'iil ma' jenaj tah wach kikojorik taqe eh je' woo, re' i Araaw inb'ehsjik chi lajtaqiil eh re' Maaya inb'ehsjik chi juninaqiil. Inb'ehsjik wach chi reh reh kiwach taqe i ye'aab' maj injalaaj wach i tz'aaq inkiyew, keh taqe ehtaliil, pan Araaw re' peet lok' keh taqe lajtaq, rukab' lok keh taqe junk'ahliil; Pan Maaya re' rukab' lok' keh taqe juninaq, re' roox lok' keh taqe juniq'ob'.

Kamanik •

Je' rukab' xkuhtjik cho aweh, chach'aq kiwach taqe ehtaal k'ihaal, chi ju'junaal, chi lajtaqiil, chi ho'k'ahliil eh wilik chik ruman. Eh wilkeeb' wo' i na ach'aqem taqe chi juninaqiil, chi juniq'ob'iil, chi junch'uyiil ku aha' ne' rupahqaaj.

• 21	•••• 8,000
•• 442	—— 160,000
••• 7,999	—• 3,600.021

Pajoj iib'.

Chih jarik injalaaj wii' i ma'xtah reh ajlanb'al araaw ruuk' i majaa' jenaj reh ajlanb'al Maaya?

Aha' inchaal cho wii' i raa' q'orik ma'xtah keh taqe Araaw?

Chi reet noq inq'orjik chi re' ajlanb'al araaw lajeeb' inb'ehsanik reh, eh re' i reh Maaya juninaq inb'ehsanik reh?

Chatz'ihb'aaj kib'ihnaal ye'ooj keh taqe ehtaal ma' jenaj, pan ajlanb'al Maaya.

Rukab' Ch'uq
Re' taqe ehtalil tz'ihb' keh ajlanik pan araaw eh maaya

Re' ajwaal wach chi na rutijiljiik:

Reht'eljiik kiwach taqe ehtalil reh rutz'ihb'jiik ajlanik pan Araaw eh pan Maaya.

Rukojariik chi korik taqe kiye'aab' taqe ehtaal tz'ihb ajlanik pan Araaw ruch'iil i reh Maaya.

Tik'aab' reh.

Maj qeht'aliim chik chi re' b'anooj riij i xa pa' jariik chi ajlanik, reh reh wach ne' inb'anarik reh. Maj qeht'al chi re' rub'ehsjiik wach ajlanik Araaw ruuk' i reh Maaya ma' jenaj ta wach. Ma' jenaj tah kiwach ruum taqe wili:

- • Ruum i k'ihaal wach i kehtaal.
- •• Ruum jarub' tz'aaq iruq'or i kehtaal.
- ••• Ruum i kaa' b'ehsb'al keh.

• Ruum i k'ihaal wach kehtaal.

Noq qohq'orik wach naah i k'ihaal wach kehtaal taqe ajlanb'al, inqaaj qaq'orom chi reh reh kiwach je' rukab' i keh Araaw, Romaan, Maaya.

Re' taqe ehtaal reh ajlanik pan araaw.

Re' ajlanik Pan Araaw, lajeeb' kiwach taqe ehtaal tz'ihb' ajlanik kikamanik, eh kikojarik reh b'anooj iij xapa' jarik qeh, ajlanb'al eh xapa' chik jarik.

Kajtz'u'k 2

0, 1, 2, 3, 4, 5, 6, 7, 8, ut 9

Re' taqe ju'jun chi ehtaal wili xa'aha' inqil taqe kiwach, wilkeeb' chi kiwach taqe q'orb'al reh chi najt, chi kiwach taqe paat reh kehtaliil, chi kiwach taqe huuj reh ajlanb'al q'iij, chi kiwach taqe ch'ihch' tumiin, chi kiwach taqe huuj tumiin, pan taq k'aay, xa'aha ne' inqaraq taqe.

Re' taqe ehtaal reh ajlanik pan maaya.

Xa ma' re' ta taqe ajaraaw xkitiq'aa' wach taqe rehtaliil ki'ajlaniik, je' wo' taqe maaya xkitiq'aa' wo' chu wach i rehtaliil i ki'ajlaniik, reh i re' inkojarik ixib' wach chi ehtaliil reh kitz'ihb'jiik taqe ajlanik rutik'aa' wii' jenaj ko juninaq eh kikojarik reh ajlanik oon b'anooj riij xachih jarik. Re' taqe wili i ehtaal:

Kajtz'u'k 3

Re' taqe ehtaliil wili inqareq chi kiwach taqe k'ih laj ye'aab', eh reh reh wach i ajlanik inkiq'or, inqaraq chi kiwach taqe huuj tumiin juntoq q'uuq, chi kiwach huuj tumiin jenaj q'uuq eh chi kiwach taqe ab'aj xkikanaa' kahnoq chu paam nimaq taq tinamit xkijohsaj cho wach taqe qamaam qati't.

Qil wach i huuj tumiin jenaj q'uuq' iruq'or qeh:

·· Re' tz'aaq ju'jun chi ehtalil.

Re' kitz'aaq taqe ehtaal ajlanik pan araaw.

Chi kunchelaal taqe ehtaliil tz'ihb'amaj chik cho, iruq'or jenaj k'ihaal chi xapa' jarik, k'achareel kuuk' kajtz'u'k on xachih chik jarik. Chi qawach na qilom johtoq jenaj kajtz'u'k aha' ruk'uhtaaj qeh jarub' iraaj ruq'orom qeh i ju'jun chi ehtaliil.

0	ma'xta paam	5	ho'oob'
1	jenaj	6	waqiib'
2	ki'ib'	7	wuquub'
3	ixib'	8	wahxaqiib'
4	kijeb'	9	b'elejeeb'

Kajtz'u'k 4

0	1	2	3	4
	✻	✻ ✻	✻ ✻ ✻	✻ ✻ ✻ ✻

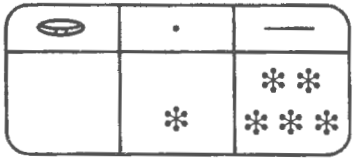
5	6	7	8	9
✻ ✻ ✻ ✻ ✻	✻ ✻ ✻ ✻ ✻ ✻	✻ ✻ ✻ ✻ ✻ ✻ ✻	✻ ✻ ✻ ✻ ✻ ✻ ✻ ✻	✻ ✻ ✻ ✻ ✻ ✻ ✻ ✻ ✻

Re' wilih iraaj ruq'orom qeh chi kuuk' taqe ehtaliil keh i ajlanik , ne' rub'an ne' inqayeew rub'iral taqe chih jarik ku b'elejeeb'. Xare' la' i wili iruq'or qeh xa ruum i rehtaal i tz'ihb' ajlanik.

Jarub' kitz'aaq taqe chi ehtaal pan ajlanb'al maaya.

Re' ju'jun chi ehtaliil reh rutz'ihb'jiik i ajlanik pan Maaya inkiq'or nik' k'ihaal taqe i chih jarik. Yu'nah na qilom chu paam i kajtz'u'k re' taqe jarub' inkaaj kiq'orom qeh taqe ehtaal pan Maaya.

Kajtz'u'k 5



Re' wili iraaj ruq'orom qeh chi ne rub'an chi ne' inqatz'ihb'aaj kehtaal nik' k'ihaal taqe chih jarik on rehtaal jino'q tzuhb'.

··· Jarub' iraaj ruq'orom re' q'oreel i kaa' b'ehsb'al keh.

Noq kojq'orik wach naah i raa' b'ehsbal reh, k'ahchi'qaq'orom chi jarub' injalaaj wii' taqe ajlanb'al chu paam i ajlanik, qaq'or pan Araaw kijahlik chi lajtaq maj re' lajeeb' i raa' cho, chu paam i ajlanb'al maaya kijahlik chi juninaq taq, maj re' i juninaq i raa' cho. Qil ajik nik' wach je' noq injahlik kiwach taqe ajlanik Araaw ruuk' i Maaya.

Re' rub'ehsjiik wach i ajlanik pan araaw.

Re' ajlanik wilih wilik cho chi raa' b'ehsb'al reh, re' i lajeeb', ruum i re' inq'orjik reh chi lajeeb' i naah, injahlik wach i rutz'ihb'jiik chi lajtaqiil. Kiib' ruwii' wach i tz'aaq, jenaj re' tz'aaj i rehtaal rutz'ihb'jiik eh jenaj chik re' tz'aaq ruum i ruye'aab'. Je' rukab' xqaq'or chik, chi re' ajlanik wili lajeeb' taqe rehtaal irukoj reh rutz'ihb'aal.

Re' taqe "Ajgrieeg, ajromaan" inq'oraar keh, ma' xteh tah chi korik chi kiwach taqe ajlanik, ruum i re', ma' xib'ehik ta chi najt wach kinaah taqe ajlanik. Re' taqe aj "hindúes" xkireq chi riij taqe ajlanik, noq xkeht'aliij wach i ma' jino'q, eh xkiraq chi riij re' kitz'aaq taqe ehtaal ruum i ruye'aab'. Re' taqe Araaw xkiyeew rib'iral i wilih ar kuuk' i tinamit juntar Palaw (Europa) wahxaqiib' ho'k'ahl chi haab' chi naah johtoq i rasb'aal i Kriisto. Ruum i re', re' taqe ajlanik keh araaw inq'orjik wo' reh "Indo-arábigo" 2 (p. 26).

Jarub' tz'aaq re' q'oreel i rehtalil.

Re' tz'aaq ruum i rehtaal inq'orjik reh xa ruum i rehtalil intz'ihb'jik. Qil i ruwaaq kajtz'u'k.

Kajtz'u'k 6

0	1	2	3	4	5	6	7	8	9

Re' tz'aaq ehtaal ajlanik re' q'oreel i ruye'aab'.

Re' tz'aaq iruq'or ruum i ye'aab' aha' wilik wii' i ehtaliil ajlanik.

Kajtz'u'k 7

10^5	10^4	10^3	10^2	10^1	10^0	
1	1	1	1	1	1	
100,000	10,000	1,000	100	10	1	
Ruwaaq lok	Roo' lok'	Rukaaj lok'	Roox lok'	Rukab' lok'	Peet lok'	
100,000+	10,000+	1,000+	100+	10+	1	111,111

Mi inqakoj rehtaal xa' re' wo' i rehtaal ajlanb'al tz'ihb'amaj, eh reh reh wach k'ihaal iruq'or maj xjalarik taqe i ruye'aab'. Chi cheel reje i nim laj kajtz'u'k xtz'ihb'jik je re' jarub' inkiq'or chi kunchelaal taqe ehtaal ajlanb'al eh re' i 111,111.

Ruch'ob'ariik wach i kajtz'u'k 7.

• Re' taqe peet kajtz'u'k k'ixkaab' iruq'or qeh jarub' inkaaj kiq'orom qeh taqe ehtaal 1.

•• Re' taqe rukab' kajtz'u'k iruq'or qeh chi jariik lok' wilkeeb' wii'.

••• Re' taqe roox kajtz'u'k iruq'or qeh jarub' iraaj ruq'orom ruum i ruye'aab'

•••• Re' taqe rukaaj kajtz'u'k iruk'uhtaaj qeh re' rehtaal i ajlanb'al 1.

—— Re' taqe roo' kajtz'u'k iruq'or qeh jar-pech ink'ihaxb'ik wach i raa' b'ehsb'al reh i ajlanik, re' 10.

Qil taqe pan ehtaal kajtz'u'k 8, 9, 10 y 11.

Ehtaal 1: 784,532

Kajtz'u'k 8

10^5	10^4	10^3	10^2	10^1	10^0	
7	8	4	5	3	2	
700,000	80,000	4,000	500	30	2	
Mi re' 10^5 eliik wach ruuk' i 100,000, iraaj ruq'orom chi 700,000 ineel i 100,000 x 7.	Mi re' 10^4 eliik wach ruuk' i 10,000 iraaj ruq'orom chi 80,000 ineel i 10,000x 8.	Mi re' 10^3 eliik wach ruuk' i 1,000, raaj ruq'orom chi 4,000 ineel i 1,000 x 4.	Mi re' 10^2 eliik wach ruuk' i 100, iraaj ruq'orom chi 500 ineel i 100 x 5.	Mi re' 10^1 eliik wach ruuk' i 10 iraaj ruq'orom chi 30 ineel i 10 x 3.	Mi re' 10^0 eliik wach ruuk' i 1 iraaj ruq'orom chi 1 ineel i 1 x 2.	
Ruwaaq lok	Roo' lok'	Rukaaj lok'	Roox lok'	Rukab' lok'	Peet lok'	
700,000+	80,000+	4,000+	500+	30+	2	784,532

Kajtz'u'k 9

10^5	10^4	10^3	10^2	10^1	10^0	
4	8	0	5	0	0	
400,000	80,000	0	500	0	0	
Mi re' 10^5 eliik wach ruuk' i 100,000, iraaj ruq'orom chi 400,000 ineel i 100,000 x 4.	Mi re' 10^4 eliik wach ruuk' i 10,000 iraaj ruq'orom chi 80,000 ineel i 10,000x 8.	Mi re' 10^3 eliik wach ruuk' i 1,000, iraaj ruq'orom chi 0 ineel i 1,000 x 0.	Mi re' 10^2 eliik wach ruuk' i 100, iraaj ruq'orom chi 500 ineel i 100 x 5.	Mi re' 10^1 eliik wach ruuk' i 10 iraaj ruq'orom chi 0 ineel i 10 x 0.	Mi re' 10^0 eliik wach ruuk' i 1 iraaj ruq'orom chi 0 ineel i 1 x 0.	
Ruwaaq lok	Roo' lok'	Rukaaj lok'	Roox lok'	Rukab' lok'	Peet lok'	
400,000+	80,000+	0+	500+	0+	0	480,500

Chu paam i kajtz'u'k wilih, re' ma' jenaj, k'ih taqe i lok' xkojorik wii'.

Ehtaal 3: 916,320

Kajtz'u'k 10

10^5	10^4	10^3	10^2	10^1	10^0	
9	1	6	3	2	0	
900,000	10,000	6,000	300	20	0	
Mi re' 10^5 eliik wach ruuk' i 100,000, iraaj ruq'orom chi 900,000 ineel i 100,000 x 9.	Mi re' 10^4 eliik wach ruuk' i 10,000 iraaj ruq'orom chi 10,000 ineel i 10,000 x 1.	Mi re' 10^3 eliik wach ruuk' i 1,000, raaj ruq'orom chi 6,000 ineel i 1,000 x 6.	Mi re' 10^2 eliik wach ruuk' i 100, iraaj ruq'orom chi 300 ineel i 100 x 3.	Mi re' 10^1 eliik wach ruuk' i 10 iraaj ruq'orom chi 20 ineel i 10 x 2.	Mi re' 10^0 eliik wach ruuk' i 1 iraaj ruq'orom chi 0 ineel i 1 x 0.	
Ruwaaq lok	Roo' lok'	Rukaaj lok'	Roox lok'	Rukab' lok'	Peet lok'	
900,000+	10,000+	6,000+	300+	20+	0	916,320

Ehtaal 4: 642,619

Kajtz'u'k 11

10^5	10^4	10^3	10^2	10^1	10^0	
6	4	2	6	1	9	
600,000	40,000	2,000	600	10	0	
Mi re' 10^5 eliik wach ruuk' i 100,000, iraaj ruq'orom chi 600,000 ineel i 100,000 x 6.	Mi re' 10^4 eliik wach ruuk' i 10,000 iraaj ruq'orom chi 40,000 ineel i 10,000 x 4.	Mi re' 10^3 eliik wach ruuk' i 1,000, raaj ruq'orom chi 2,000 ineel i 1,000 x 2.	Mi re' 10^2 eliik wach ruuk' i 100, iraaj ruq'orom chi 600 ineel i 100 x 6.	Mi re' 10^1 eliik wach ruuk' i 10 iraaj ruq'orom chi 10 ineel i 10 x 1.	Mi re' 10^0 eliik wach ruuk' i 1 iraaj ruq'orom chi 9 ineel i 1 x 9.	
Ruwaaq lok	Roo' lok'	Rukaaj lok'	Roox lok'	Rukab' lok'	Peet lok'	
600,000+	40,000+	2,000+	600+	10+	9	642,619

Re' rub'ehsjiik wach i ajlanik ruu' i na'ojb'aliil maaya.

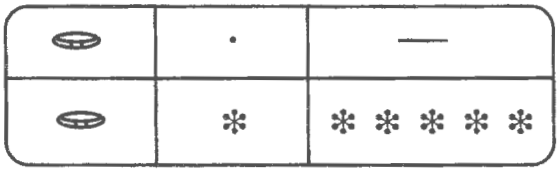
Noq kojq'orik wach kinaah kehtaliil taqe ajlanik Maaya, k'ahchi'qaq'oriik wach naah taqe ajlanik xkuksaj cho wach najtir q'iij, taqe qamaam qati't Maaya.

Re' rub'ehel i ajlanik Maaya, re' i juninaq cho i raa', re' iraaj ruq'orom qeh chi injalaaj chi juninaqiil. Kiib' wo' wach i tz'aaq oon jarub' iruq'or, re' peet, re' jarub' iruq'or i rehtaliil, eh re' chik irukab' re' iruq'or jarub' tz'aaq xa ruum i ye'aab' aha' wilik wii' i ehtaliil. Ixib' wach i ehtaliil reh rutz'ihbjiik taqe ajlanik.

Re' jarub' tz'aaq iruq'or ruum i rehtaal.

Re' tz'aaq ruum i rehtaal inq'orjik reh xa ruum tiij i ehtaal intz'ihb'jik. Qil taqe kajtz'u'k 12 eh 13.

Kajtz'u'k 12



Chu paam i kajtz'u'k wili inqareq taqe ajlanb'al pan Maaya re' jenaj ku inpoon juninaq.

Kajtz'u'k 13

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Re' tz'aaq ehtaal ajlanik re' q'oreel i ruye'aab'.

Re' tz'aaq iruq'or re' q'oreel i ruye'aab' aha' wilik wii' i ehtaliil ajlanik.

Kajtz'u'k 14

20^4	•	160,000	Roo' lok'	+160,000
20^3	•	8,000	Rukaaj lok'	8,000
20^2	•	400	Roox lok'	400
20^1	•	20	Rukab' lok'	20
20^0	•	1	Peet lok'	1
			Chu'nchel	168,421

Mi xkakoj rehtaal, chi kipaam taqe lok'iil xa re' wo' ehtaliil ajlanik wilik, xa re' la' xjalaaj kiye'aab' ruum i re', reh reh wach k'ihaal iruq'or qeh, je' ajik re' noq inooj aloq wach re' tz'aaq iruq'or ruum i ye'aab' aha' wilik wii' i ehtaliil ajlanik.

Ruch'ob'oriik wach i kajtz'u'k 14.

- • Re' peet kajtz'u'k, re' wilik ku k'ixkaab', iruq'or qeh nik' k'ihaal i ajlanik xqaaj qatz'ihb'aam.
- •• Re' rukab' ye'aab' iruq'or qeh re' i lok'iil wilik wii'.
- ••• Re' roox ye'aab' iruq'or qeh jarub' tz'aaq ruum i ye'aab' wilik wii'
- •••• Re' rukaaj ye'aab' iruk'uhtaaj qeh taqe ehtaliil reh i ajlanik.
- — Re' roo' ye'aab' iruq'or qeh jarub' pech johsamaj riij i ehtaal ajlanik chi kipaam taqe ju'jun lok'.

Qil taqe kajtz'u'k 15, 16, 17 eh 18.

Chu paam i kajtz'u'k 15, na qakojom wo' chik i ehtaal ajlanik xkojarik cho chu paam i kajtz'u'k 7 pan Araaw.

Ehtaal 1: 784,532

Kajtz'u'k 15

20^4	Mi re' 20^4 eliik wach ruuk' 160,000 iraaj ruq'orom chi 160,000 x •••• = 640,000 ineel.	••••	+640,000
20^3	Mi re' 20^3 eliik wach ruuk' 8,000 iraaj ruq'orom chi 8,000 x = 144,000 ineel.		144,000
20^2	Mi re' 20^2 eliik wach ruuk' 400 iraaj ruq'orom chi 400 x • = 400 ineel	•	400
20^1	Mi re' 20^1 eliik wach ruuk' i 20 iraaj ruq'orom chi 20 x . = 120 ineel.		120
20^0	Mi re' 20^0 eliik wach ruuk' i 1 iraaj ruq'orom chi 1 x = 12 ineel.		12
Chu'nchel			784,532

Ehtaal 2: 480,500

Kajtz'u'k 16

20^4	Mi re' 20^4 eliik wach ruuk' 160,000 iraaj ruq'orom chi 160,000 x ••• = 480,000 ineel.	•••	+480,000
20^3	Mi re' 20^3 eliik wach ruuk' 8,000 iraaj ruq'orom chi 8,000 x = 0 ineel.		0
20^2	Mi re' 20^2 eliik wach ruuk' 400 iraaj ruq'orom chi 400 x • = 400 ineel	•	400
20^1	Mi re' 20^1 eliik wach ruuk' i 20 iraaj ruq'orom chi 20 x —— . = 120 ineel.	——	100
20^0	Mi re' 20^0 eliik wach ruuk' i 1 iraaj ruq'orom chi 1 x = 0 ineel.		0
Chu'nchel			480,500

Ehtaal 3: 916,420

Kajtz'u'k 17

20^4	Mi re' 20^4 eliik wach ruuk' 160,000 iraaj ruq'orom chi 160,000 x —— = 800,000 ineel.	——	+800,000
20^3	Mi re' 20^3 eliik wach ruuk' 8,000 iraaj ruq'orom chi 8,000 x ⁘ = 112,000 ineel.	⁘	112,00
20^2	Mi re' 20^2 eliik wach ruuk' 400 iraaj ruq'orom chi 400 x = 4,000 ineel.	=	4,000
20^1	Mi re' 20^1 eliik wach ruuk' i 20 iraaj ruq'orom chi 20 x ≡ . = 320 ineel.	≡	320
20^0	Mi re' 20^0 eliik wach ruuk' i 1 iraaj ruq'orom chi 1 x ⊜ = 0 ineel.	⊜	0
Chu'nchel			916,320

Ehtaal 4: 642,619

Kajtz'u'k 18

20^4	Mi re' 20^4 eliik wach ruuk' 160,000 iraaj ruq'orom chi 160,000 x •••• = 480,000 ineel.	••••	+640,000
20^3	Mi re' 20^3 eliik wach ruuk' 8,000 iraaj ruq'orom chi 8,000 x = 0 ineel.		0
20^2	Mi re' 20^2 eliik wach ruuk' 400 iraaj ruq'orom chi 400 x = 2,400 ineel.		2,400
20^1	Mi re' 20^1 eliik wach ruuk' i 20 iraaj ruq'orom chi 20 x . = 200 ineel.		200
20^0	Mi re' 20^0 eliik wach ruuk' i 1 iraaj ruq'orom chi 1 x = 19 ineel.		19
Chu'nchel			642,619

Re' taqe kajtz'u'k xkil aloq taqe ruk'uhtaaj qeh chi juninaqiil inb'ehik i ajlanb'al xkuksaj cho wach najtir q'iij taqe qamaam qati't.

Re' xq'orjik.

Noq xqil cho chi kunchilaal taqe ehtaliil tz'ihb'al taqe ajlanik, xqakoj rehtaal chi ixib' rureqariik kiwach xqab'an, re' taqe i wilih:

- • Ruum i k'ihaal wach i kehtaal.
- •• Ruum jarob' tz'aaq iruq'or i kehtaal.
- ••• Ruum i kaa' b'ehsb'al keh oon re' i ye'aab' wilik wii'.

Qil aha' kijalaaj wii' taqe ehtaliil ajlanik.

Re' Araaw irukoj 10 ehtaliil reh ajlanik, re' wilih taqe: 0, 1, 2, 3, 4, 5, 6, 7, 8, y 9.

Re' ehtaliil ajlanik Maaya 3 irukoj, re' wili taqe: Jenaj aha' injalaaj wii' kiwach, re' i tz'aaq iruq'or ju'jun chi ehtaliil.

Re' taqe ehtaal reh ajlanik Araaw, re' taqe i wilih tz'aaq:

0 Ma'xtah wilik
1 ✻
2 ✻ ✻
3 ✻ ✻ ✻
4 ✻ ✻ ✻ ✻
5 ✻ ✻ ✻ ✻ ✻
6 ✻ ✻ ✻ ✻ ✻ ✻
7 ✻ ✻ ✻ ✻ ✻ ✻ ✻
8 ✻ ✻ ✻ ✻ ✻ ✻ ✻ ✻
9 ✻ ✻ ✻ ✻ ✻ ✻ ✻ ✻ ✻

Re' taqe ehtaliil reh ajlanik pan Maaya re' taqe wili kitz'aaq:

⬭ Tik'aab' on ch'ikaab' reh ajlanik.

• ✻
— ✻ ✻ ✻ ✻ ✻

Ruum i raa' b'ehsb'al reh.

Keh taqe Araaw, re' raa' injohtik wii' naah i ki'ajlanb'aal re' i lajeeb'.

Chu paam i ajlanb'al Maaya, re' raa' aha' injohtik wii' naah i ajlanb'al re' i juninaq.

Kamanik ••

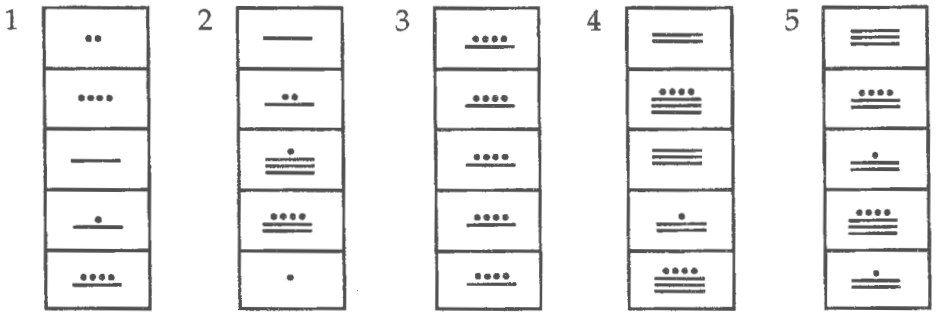
Chach'ob' kiwach taqe ajlanb'al inye'arik aweh, chab'an pan Araaw eh pan Maaya, je' rukab' xqil chi xb'anarik cho reh.

1	29	6.	2,999	11.	80,641	16.	1,364,420
2	100	7.	6,000	12.	150,677	17.	2,999,999
3.	422	8.	7,999	13.	160,000	18.	168,420
4.	1,000	9.	9,367	14.	1,500,4444	19.	3,000,020
5.	1,221	10.	40,500	15.	2,269,328	20.	3,200,000

Kamanik •••

Chakorsaj pan ajlanb'al Araaw taqe ajlanb'al Maaya inye'jik aweh:

1 2 3 4 5



Kamanik ••••

Chawik'saj taqe ajlanb'al Araaw pan Ajlanb'al Maaya.

1. 200,888
2. 360,202
3. 10,100
4. 1,111,111
5. 11,689,401

Pajoj iib'.

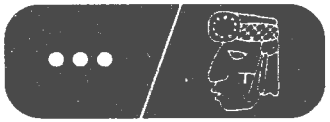
Chatz'ihb'aaj chih jarik kijahlik wii' taqe ajlanb'al Araaw ruuk' i ajlanb'al pan Maaya. Tiq'oroq wach kinaah taqe:

- Ruum i k'ihaal wach i kehtaal.
- Ruum jarob' tz'aaq iruq'or i kehtaal.
- Ruum i kaa' b'ehsb'al keh oon re' i ye'aab' wilik wii'.

Chih xub'an i pajooj iib' chawach? Mi xeel korik, mi je' re', ti'ik'oq chu paam i ch'uq inchaal chi qawach, mi ma' je' re' chawil wo' chik wach, ko rehtaal ne inkahnik chi korik chawach.

TIB'EHOQ CHAWACH, MA' TIPA'HIK, RE' TAQE EHTALIL AJLANIK XTI Q'E' HOLOHIK REH KOJB'AL RUMAN KANA'OJB'AL

Roox Ch'uq
Re' ruk'amariik naah chi lajtaqiil i ajlanik pan araaw



Re' ajwaal wach chi na rutijiljiik:

Rukojariik i ajlanb'al Araaw, reh b'anb'al riij taqe chih jarik i k'axkiil inqareq pan ajlanik.

Rub'ehsjiik wach chi korik i ajlanb'al Araaw.

Tik'aab' reh.

Reh chi ne inqareq chi riij chi korik chih jarik na qatijem chu paam i ch'uq wilih, ko ruman chi na qeht'aliim k'isinoq wach naah i rasb'aal i ajlanik Araaw.

Wilkeeb' taqe tahs huuj k'uhtb'al ajlanik inqaraq taqe ruch'ob'ariik b'ehsb'al reh ajlanik Araaw je' wo' wach naah i keh taqe "romaan". Chu paam i ch'uq wilih na qaq'oriik wach naah i ajlanb'al Araaw, maj re' inkitik'aa' ruk'uhtjik qeh noq qoh'ooj chi tijinik pan tijinb'al.

Re' taqe b'ehsb'al ajlanik na qab'ehsam wach, wilkeeb' i keht'aliim chik paam, xa re' la ko ruman wo' reh chi na qab'ehsam wach pan qak'achariik, maj re' wili xti q'e' na rukamaniik qeh jalb'al wach i tijinik inye'jik keh yu'nah taqe qatinamiit. Ruum i re' ko ruman chi na qeht'aliim paam chi korik reh chi ne kohchol ruk'uhtjiik keh taqe qajtijineel.

Maj xqaq'or chik cho, chi re' ajlanik pan Araaw ruuk' i Maaya, injalaaj maj jenaj, re' lajeeb' inb'ehsenik reh, eh re' jenaj reh i juninaq inb'ehsenik reh.

Re' ruk'amariik naah chi lajtaqiil i ajlanik.

Reh kitz'ihb'jiik taqe ehtaal ajlanik Araaw, ajwaal wach chi na qab'ehsam wach lajeeb' chi ehtaliil, re' taqe i wilih:

Kajtz'u'k 19

Re' ajlanik wilih wilik cho chi raa' b'ehsb'al reh, re' i lajeeb', ruum i re' inq'orjik reh chi lajeeb' i naah, injahlik wii' wach i rutz'ihb'jiik. Ne' inqakoj rehtaal chu paam i kajtz'u'k inchaal chi qawach, inqakoj taqe lajeeb' chi ehtaliil xakutkeel, eh reh chik inchaal chi kiwach kiib' chik inkilaq'aa' kiib' maj inchaal wo' chik i 0, re' ehtaal xutik'aa' cho wii', eh inkojarik chi cheel i 1, ruuk' i wilih intz'ihb'jik i rehtaal i 10.

Kajtz'u'k 20

1	2	3	4	5	6	7	8	9	10

Mi inqakoj rehtaal reh rutz'ihb'jiik i lajeeb', xqakoj chik i ehtaal 1 re' i wilik pan rutik'aab', ruch'iil chik i 0.

Yu'nah qeht'aliim chik chi re rutz'ihb'jiik jino'q ajlanik nim naah chu wach i lajeeb', ko ruman chi na qakojom ki'ib' chi ehtaliil, re' ne qohchol rub'anariik chi je' wilih:

Na qakojom wo' chik i peet ehtaal, re' 1 re' ehtaal q'eq, ruch'iil i 0, chi chik iraaj chi kojorik chi ruch'iil taqe ehtaal 1 ku rehtaal na ruponiik 9, je' rukab' rutusuriik cho chu paam i **kajtz'u'k 1**, pan tik'aab' reh i tijinik wilih.

Re' iraaj ruq'orom chi je' wilih irub'ehsjiik na rub'anariik: re' 1 ruch'iil i 0, ku re', re' chik i 1 na ruch'ihleem, re chik i 2, re' chik i 3, ku rehtaal na ruponiik 9. Na' qohponoq ruuk' i 9, na qakojom rehtaal chi re' i 1 xqakoj cho reh rutz'ihb'jiik i 10, injalaaj wo' chik, qil i kajtz'u'k 21.

Kajtz'u'k 21

11	12	13	14	15	16	17	18	19	20

Chu paam i kajtz'u'k wilih, [illegible]

[illegible]

Kajtz'u'k 22

21	22	23	24	25	26	27	28	29	**30**

Eh je' re' inooj jahloq kiwach taqe peet ehtaal eh inkojarik chi kicheel taqe ehtaal 1 ku Inponik 9, noq inpoon ayu' injahlik wo' chik kiwach eh inkojarik i 0 chi kicheel. Chawil eh chamahsaj i kajtz'u'k 23.

Kajtz'u'k 23

1	2	3	4	5	6	7	8	9	**10**
11	12	13	14	15	16	17	18	19	**20**
21	22	23	24	25	26	27	28	29	**30**
31	32						38	39	**40**
41	42						48	49	**50**
51	52						58	59	**60**
61	62						68	69	**70**
71	72						78	79	**80**
81	82						88	89	**90**
91	92						98	99	

Je' wo' wilih injalaaj noq inponik chi ixib' chik wach, re taqe ehtaal kichaal chi riij i 99. Ar kijorik ixib' chik chi ehtaliil, re inchaal chi riij i 99 re' i 100, re' wilih k'ahchi'ruq'orom qeh chi ne injalarik i peet ehtaal; re' wilih inooj aloq chi je' re' ku 109, ku re' injalaaj wo' chik i rukab' ehtaal chi je' wilih 110.

Reh chi ma' ne' tah qohq'ihlik chu paam i wilih qil i kajtz'u'k inchaal chi qawach, re' wilih na koojrutob'eem chi rureqariik chi riij chih reet noq re' lajeeb' naah b'ehsb'al reh i ajlanik wilih, reh i re' na qakojom i kajtz'u'k ch'eqooj chi lok'iil.

Kajtz'u'k 24

10^5	10^4	10^3	10^2	10^1	10^0
1	1	1	1	1	1
100,000	10,000	1,000	100	10	1
Ruwaaq lok'	Roo' lok'	Rukaaj lok'	Roox lok'	Rukab' lok'	Peet lok'

Mi inqakoj rehtaal chi kipaam taqe lok', xa' re' woo i ehtal ajlanb'al tz'ihb'imaj, eh reh reh wach k'ihaal iruq'or maj xjalaaj taqe iruye'aab'.

Ruch'ob'oriik wach i kajtz'u'k 24.

- Re' taqe peet kajtz'u'k k'ixkaab' iruq'or qeh chi jarik lok' wilkeeb' wii'.
- Re' taqe rukab'kajtz'u'k iruq'or qeh jarob' iraaj ruq'orom ru'uum i ruye'aab'.
- Re' taqe roox kajtz'u'k iruk'uhtaaj qeh re' rehtaal i ajlanb'al 1.
- Re' taqe rukaaj kajtz'u'k iruq'or qeh jarob' pech ink'ihalb'ik wach i raa' b'ehsb'al reh i ajlanik, re' 10.

Re' xq'orjik.

Re' ajlanik pan Araaw, iraaj ruq'orom chi lajeeb' i b'ehsb'al reh, maj lajeeb' i ehtaal inkojarik reh tz'ihb'al reh, eh reh chi ne inqareq chi riij chi korik, ne' rub'an chi ne inkamanik qeh i kajtz'u'k, lok'o'maj paam. Chi kipaam taqe i lok' wilih ne' rub'an chi ne' inqatz'ihb'aaj taqe ehtaal, re' rehtaal aha' i ye'aab' wilik wii', ne' nooj jahloq i tz'aaq jarub' iruq'or.

Kamanik —

Yu'nah chi xqareq chik chi riij nik' je' noq inb'ehsjik kiwach taqe ajlanb'al Araaw, qach'aq taqe ajlanb'al wilkeeb' chi ri'sil i tz'ihb' wilih, chatiq'aa' jino'q kajtz'u'k ruch'iil taqe rulok'iil, chakoj ar taq re' ju'jun chi ehtaliil ajlanb'al.

1. 120
2. 569
3. 999
4. 1,111
5. 6,111
6. 11,111
7. 99,999
8. 82,706
9. 100,917
10. 999,999

Pajoj iib'.

Nik' wach je' i ajlanik inb'anjik pan ajlanb'al Araaw?

Chih jarik ne' inqakoj reh qohrutob'eej reh rureqariik chi riij i ajlanik pan Araaw?

Chi nik' wach je' noq injohtik johtoq wach i ajlanik pan Araaw?

MI XARAQ CHI RIIJ CHIH JARIK XQ'ORJIK CHU PAAM I CH'UQ WILIH?

MI JE' RE', TI'IK'OQ PA RUKAAJ CH'UQ

MI NA KAPAAJ CHI KU RUMAN RILJIIK WO' CHIK WACH, CHAWIL JUNSUT OQ CHIK

Rukaaj Ch'uq
Re' rub'ehsjiik wach i ajlanik ruuk' i na'ojb'aliil maaya

Re' ajwaal wach chi na rutijiljiik:

Rukojariik chi korik i ajlanb'al chi juninaqiil Maaya.

Ruraqjik chi riij nik' wach noq kib'ehik taqe lok'iil pan Ajlanb'al Maaya.

Tik'aab' reh.

K'ih taqe tahs huuj k'uhtb'al ajlanik inqaraq taqe ruch'ob'oriik b'ehsb'al reh ajlanik Araaw je' wo' wach naah i keh taqe "romaan", xare' la' ma' junriim xkich'op wach i qa'ajlanb'aal chi korik. Ruum i re' chu paam i ch'uq wilih na qaq'oriik wach naah i ajlanb'al Maaya, maj re' i wilih tel ajwaal naq wach chi na qeht'aliim maj re' i qeh.

Ayu' chu paam i tahs huuj wilih na ruye'jiik i k'uhtunik pan ajlanb'al Maay eh pan ajlanb'al Araaw maj ar inkitik'aa' ruk'uhtjik qeh noq qoh-ook chi tijinik pan tijinb'al, eh re' ajlanb'al Maaya, maj qeh reh qawii'.

Re' taqe b'ehsb'al ajlanik na qab'ehsam wach, wilkeeb' i keht'aliim chik paam, xa re' la ku ruman wo' reh chi na qab'ehsam wach pan qak'achariik, maj re' wilih til na rukamaniik qeh jalb'al wach i tijinik inye'jik keh yu'nah taqe qatinamiit. Ruum i re' ko ruman chi na qeht'aliim paam chi korik reh chi ne' kojchol ruk'uhtjiik keh taqe qa'ajtijineel.

Maj xqaq'or chik cho, chi re' ajlanik pan Araaw ruuk' i Maaya, injalaaj maj jenaj, re' lajeeb' inb'ehsenik reh, eh re' jenaj re i juninaq inb'ehsenik reh.

Re' ajlanik chi juninaqiil.

Reh kitz'ihb'jiik taqe ehtaliil ajlanb'al Maaya, k'oloq pan qak'ux chi kib'ehik chi juninaqiil, maj chi juninaq xilek kijahlik, reh rutz'ihb'jiik i ajlanb'al wilih, ko ruman taqe ehtaal wilih:

Kajtz'u'k 25

Noq qohq'orik wach kinaah kehtaliil taqe ajlanik Maaya, k'ahchi'qaq'oriik wach naah taqe ajlanik xkuksaj cho wach najtir q'iij, taqe qamaam qati't Maaya. Re' rub'ehel i ajlanik Maaya, re' i juninaq cho i raa', re' iraaj ruq'orom qeh chi injalaaj chi juninaqiil. Chu

paam i kajtz'u'k inchaal chi qawach, ne' inqakoj rehtaal chi ne' kojponik ku b'elejlaj, xa ruuk' tiij rukojariik kiib' wach chi ehtaliil (• ——) eh reh rutz'ihb'jiik chik inchaal chi riij, re' i juninaq, kiib' pa reh chik laj ehtaliil kikojarik (• ⬭) re' i tz'uhr inkojarik wo' chik, re' wilih (•) jenaj iraaj ruq'orom xa re' la' pa reh chik i ruye'aab' eh ko ruman i majaa' jenaj (⬭) chi ruch'iil.

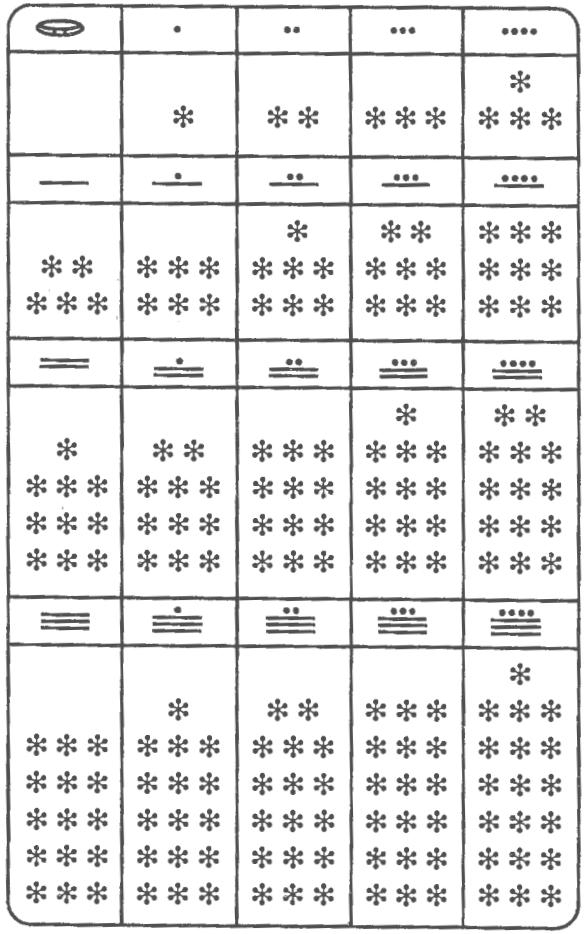
Reh i ajlanb'al pan Maaya, na qaq'oriik chi lok', eh na qatusum johtoq taqe kajtz'u'k chi k'ixkaab' na rutik'aam eh taxaaj na rojiik johtoq.

Chu paam i peet lok' na qakojom taqe ehtaal ju'jun tz'aaq ku rehtaal na ruponiik b'elejlaj.

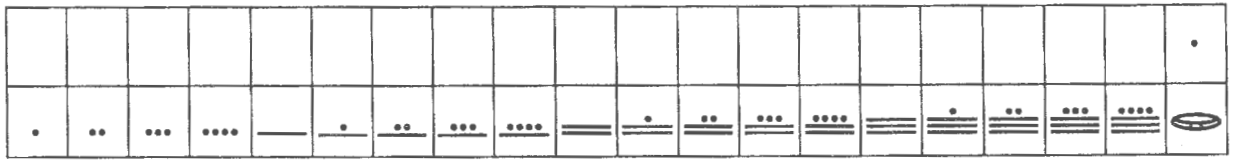
Chu paam i rukab' lok' na qakojom taqe ehtaal juninaq tz'aaq, re' taqe ehtaal ayu' b'elejlaj wo' na kiponiik, xare' la' juninaq inkaaj kiq'orom i ju'jun.

Kuuk' taqe ehtaliil xk'uhtjik cho ne kojpoon ku b'elejlaj reh rutz'ihb'jiik i ajlanik taqe i chih jarik. Yu'nah na qilom chu paam i kajtz'u'k re' taqe jarub' inkaaj kiq'orom qeh taqe ixeb' chi ehtaal pan Maaya.

Kajtz'u'k 26



Kajtz'u'k 27

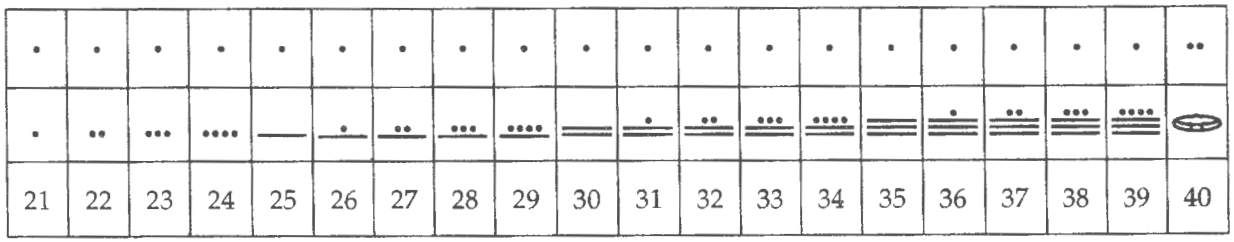


Mi xqakoj rehtaal chi reh rutz'ihb'jiik i juninaq xqakoj wo' chik i (•) jenaj, re' xqakoj cho pan tik'inb'al reh, xa re' la' ayu' xkojarik pan rukab' lok', tub'umaj ikoq ruum i ma' jenaj, re' xtz'ihb'jik pan peet lok'.

Yu'nah qeht'aliim chik chi reh kitz'ihb'jiik taqe ajlanik ki'iik' chi naah i juninaq, na qakojom paam i peet lok' re' keh taqe i ju'jun, ruch'iil i rukab' lok' re' keh taqe i juninaq.

Reh rutz'ihb'jiik johtoq taqe ajlanb'al ki'iik' chi naah i juninaq, je' wilih na qab'anam reh je' rukab' iruk'uhtaaj qeh i kajtz'u'k 28.

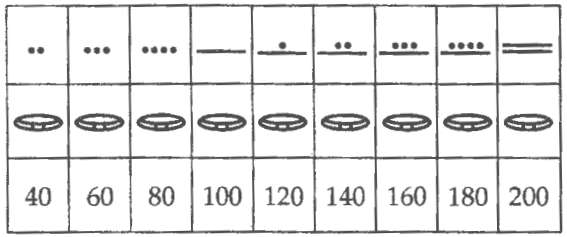
Kajtz'u'k 28



Chu paam i kajtz'u'k wilih kiib' chik taqe ehtaal xqakamaneej wii' wach re rukojoriik i kehtaal taqe ajlanik 21 ku rehtaal inpoon 39 eh re' i ajlanb'al inchaal re' i 40, xjalaaj wach , maj ma' reh tah chik jenaj tz'uhr xtz'ihb'jik pan rukab' lok', kiib' chik chi tz'uhr xitz'ihb'jik eh chi rehkeen xkojarik i rehtaal i majaa' jenaj.

Je' re' chi ju'junaal ne' rub'an chi ne' inqajohsaj johtoq naah, maj jenaj iruman nqakoj pa rukab' lok', juninaq ajik iraaj ruq'orom chi xjohtik naah. Qil i kajtz'u'k 29.

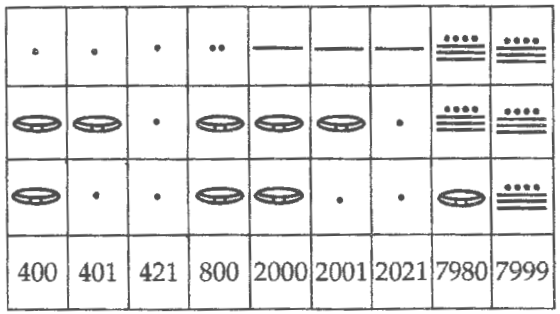
Kajtz'u'k 29



40	60	80	100	120	140	160	180	200

Mi xqakoj junlok' chik wach naah, (roox lok') re' taqe i tz'uhr ne' ki'ooj chu paam juniq'ob' (400) chik inkaaj kiq'orom qeh, eh re' taqe juuch' ne' ki'ooj chu paam i roox lok' ho'oob' iq'ob (2,000) chik na kiq'orom qeh, qakoj rehtaal re' iruk'uhtaaj qeh i qajtz'u'k 30.

Kajtz'u'k 30



400	401	421	800	2000	2001	2021	7980	7999

Je' rukab' iruq'or qeh i kajtz'u'k 30, pan peet lok', re' tz'uhr, jenaj wo' tz'aaq, re' juuch' ho'oob' tz'aaq, eh re' majaa' jenaj, re' tik'i'nb'al johtoq reh i ajlanb'al.

Pa rukab' lok' re' tz'uhr, juninaq (20) tz'aaq, re' juuch' 200 tz'aaq, eh re' rehtaal i majaa' jenaj tik'aab' reh i pa reh chik ajlanb'al.

Pa roox lok', re' tz'uhr juniq'ob' (400) tz'aaq re' juuch' 2000 tz'aaq, eh re' rehtaal i majaa' jenaj, tik'aab' reh i pa reh chik ajlanb'al.

Chi je' re' ne' nqakoj chik ruk'ihaal lok' wach kinaah, eh ne' inooj aloq chi je' wilih kitz'aaq, qil i kajtz'u'k 31.

Kajtz'u'k 31

3,200,000	•	*Escala de tres millones doscientos mil*
160,00	•	*Escala de ciento sesenta mil*
8,000	•	*Escala de ocho millares*
400	•	*Escala de cuatrocentenas*
20	•	*Escala de veintenas*
1	•	*Escala de unidades*

Chu paam i kajtz'u'k wilih nqakoj rehtaal chi re' tz'aaq i tz'uhr injalaaj noq irujal i ruye'aab'.

Re' xq'orjik.

Re' ajlanik xkib'ehsaj cho wach taqe qamaam qati't juninaq i raa' b'ehsb'al reh maj chi juninaqiil kijal ixib' i ehtaal inb'ehsjik wach reh rutz'ihb'jiik, reh chi ne inqareq chi riij chi korik i wilih, ne rub'an ne' nqatob'eej qiib' ruuk' jenaj kajtz'u'k q'atooj paam, re' na qaq'orom reh lok'. Chu paam i ju'jun chi lok' re' re', injohtik kinaah taqe ajlanb'al, re' rehtaal chih jarik lok' wilkeeb' wii'.

Kamanik ⁚

Yu'nah chi xqaraq chik chi riij nik' wach inb'ehsjik kiwach taqe ajlanb'al wilih, qach'eq eh qatz'ihb'aaj chu paam taqe lok', re' taqe ajlanb'al wilih.

1. 120
2. 569
3. 999
4. 1,111
5. 6,111
6. 11,111
7. 99,999
8. 82,706
9. 100,917
10. 999,999
11. 30,111
12. 144,999
13. 150,706
14. 160,000
15. 168,921

Pajoj iib'.

Nik' wach rutz'ihb'jiik i ajlanb'al pan Maaya inb'anarik?

Chih reet noq inq'orjik chi re' ajlanb'al pan Maaya, injalaaj chi juninaqtaq?

Jarub' naq chi ehtaal reh ajlanb'al pan Maaya ne' inkojarik reh kitz'ihb'jiik taqe ajlanb'al wilih: 8,000, 400, 20, 9?

Roo' Ch'uq
Re' rub'anariik i tahm pan taq ajlanb'al maaya eh araaw

Re' ajwaal wach chi na rutijiljiik:

Rukojariik chi korik i rub'ehil i tahm pan ajlanb'al Maaya eh Araaw.

Elik pan k'axkiil ruuk' rukojariik chi korik i rub'ehil i tahm pan ajlanb'al Maaya eh Araaw.

Tik'aab' reh.

Najtir cho q'iij, ku pa ri'sil cho i k'acharik, re' taqe k'achareel ayu' nah ak'al xkisik' cho riij jino'q rub'ehil i tahm reh i pa' jarik keh, re' wilih xwuktik cho wach ruum noq re' i k'acharik reh reh wach inooj aloq, ruum i re' xumol wach i runo'jb'al eh xutiq'aa' wach i rub'ehil iraaj k'amarik reh b'anooj tahm.

Re' i tahm inq'rojik reh, re' noq inmolorik kiwach k'ih taqe chi pa' jarik, reh chi xa jenaj chik chi k'ihaal kikorjik wii' chi kunchilaal.

Noq inqamol kiwach kiib' chi k'ihaal wach, xajenaj chik chi k'ihaal inkorjik wii'.

Re' tahm kuuk' taqe aj lanb'al araaw.

Re' tahm re' ruuk' i peet b'anooj iij reh rumoloriik kiwach taqe i pa' jarik xwuktik cho wach, reh rub'anariik i tahm, xikojorik cho taqe kuk' taq chee', ab'aj oon xa chih pa' chik jarik intz'a'jik wach reh tub'u'nb'al, maj majaa' inreaqrik naq wach chi korik.

Re' wilih taqe aha' reh i tahm:

	4,576,890 ←	Re' i na
Ehtaal Tahm →	+ 3,128,642 ←	rutahmjiik kiwach
	7,705,532 ←	Re' xtahmik wach

Mi xa jenaj i ehtaal ajlanik na rutahmjiik wach, ma' k'axik tah, mi xiik' naah chi kiib' oon ko ruman chi na qatusum kiwach, eh keh keh i tahm na qab'anam akoq pan k'ixkaab', pan keh na kojiik taqe wilkeeb' pa ruye'aab' taqe ju'jun, pan keh' na kojiik taqe wilkeeb' pa ruye'aab' taqe lajtaqiil, pan keh' na kojiik taqe wilkeeb' pa ruye'aab' taqe ho'k'ahliil.

Ehtaal 1.

Re' naah tinamit K'iche', ixib' taqe i q'ab' tinamit chi ruum i runimaal wach i kiye'aab', nimaq taqe chu wach i naah tinamit, re' taqe q'ab' naah tinamit re' taqe i wilih: Chajul 1,524, Uspantan 1,500 eh Ixkan 1,250 kilomeetr chi kajtz'u'k kinimaal. Yu'nah inqaaj qanab'eem jarub' kilomeetr taqe chi'nchel.

Chih jariik na qab'anam reh reht'eljiik nik' k'ihaal chi kilomeetr inooj aloq wii' kinimaal koxcheel?

Re' i na qab'anam ayu' re' i tahmanik, maj re' nqaaj i hoj, re' rumoloriik wach chi xa jenaj chik re' i nik' pa' k'ihaal kilomeetr wilik keh i ju'jun, re' i wilih tahm i b'ihnaal.

$$\begin{array}{r} 1{,}524 \\ 1{,}500 \\ +\ 1{,}250 \\ \hline 4{,}274 \end{array}$$

Qil chi q'uun, re' peet lok' (k'oloq pan ak'ux chi ayu' pan pa'lik inb'ehsjik kiwach taqe lok') 4 + 0 + 0 jenaj wach ruuk' 4, re' chik pa rukab' lok' 2 + 0 + 5 jenaj wach ruuk' i 7, ku re' ne' nqamol woo chik kiwach taqe ehtaal wilkeeb' pa roox lok' 5 + 5 + 2 inooj aloq chi 12, xare' la' ma' ne' tah qatz'ihb'aam taqe kab'chel chi ehtaal, xajenaj tiij, xare' i ehtaal 2 eh re' ehtaal 1 ne' inooj wach naah i rukaaj lok' eh ne' nqaq'or, 1 + 1 + 1 + 1 jenaj wach ruuk' 4, chi je' re' ku rehtaal ink'uhlik wach eh inkorjik 4,274.

Ehtaal 2.

Jenaj i kamanik xb'anaar K'iche' kuum taqe i "ASIES" eh "FUNCEDE", eh xraqjik chi riij chi ho'oob' k q'ab' naah tinamit najt wilkeeb' wii' nah palaw chi kiwach taqe kuch'iil, re' taqe q'ab' naah tinamit re' taqe i wilih: Santa Kuruus reh K'iche' 2,021, Chiche' 2,001, Chichikastenaank 2,071, Patz'ite' 2,310 eh San Pedro Jokopilas 2,135 k'ihaal meetr, wilkeeb' nah palaw. Jenaj k'achareel Aj K'iche' iraaj reht'aliim jarob' ne' ki'ooj aloq chi'nchel taqe meetr wilih, xa jenaj tah wilkeeb' wii'. Chih jarik iraaj b'anarik reh reht'aljiik reh? Iraaj b'anarik i tahm, qil mi korik.

$$\begin{array}{r} 2{,}021 \\ 2{,}001 \\ 2{,}071 \\ 2{,}310 \\ +\ 2{,}135 \\ \hline 10{,}538 \end{array}$$

Xqakoj rehtaal chi re' wo' naq i tahm iraaj kojarik, ruum i re' na qakojom jarub' i xeel chi je' wilih:

Re' k'ihaal meetr wilkeeb' wii' chi kunchilaal nah palaw, mi xqamol wach chi kunchilaal taqe q'ab' naah tinamit ne' inooj aloq: 10,538 meetr wach naah palaw.

Ehtaal 3.

Re' haab' xiik' aloq, re' ma' Wiich, xrisaj 10,045 kintaal chi ixim, 46,101 i kinaq' eh 8,818 i triiw, eh re' reh ma' reht'al tah nik' wach risjiik riij jarob' xi'eel chi kunchilaal, xupahqaaj atob'il reh i riih rumaam reh chi na rub'anariik riij reh. Chih jarik na kapaaj chi xub'an i riih rumaam i ma' Wiich, reh risjiik riij i rutik i rumaam?

Xub'an jenaj i tahm, je' wo' xunik'eej mi korik i xeel chu wach.

Qil nik' wach inisjik i nik'inb'al reh mi korik ineel i tahm:

- Kitahmjik taqe k'ihaal intik'i'jik cho k'ixkaab' eh inooj johtoq taxaaj.
- •• Re' jarub' ki'eel taqe k'ihaal kitz'ihb'jik taxaaj.
- ••• Re' jarub' ineel taxaaj, jenaj wach ruuk' i na reliik ruuk' i wilik k'ixkaab'.

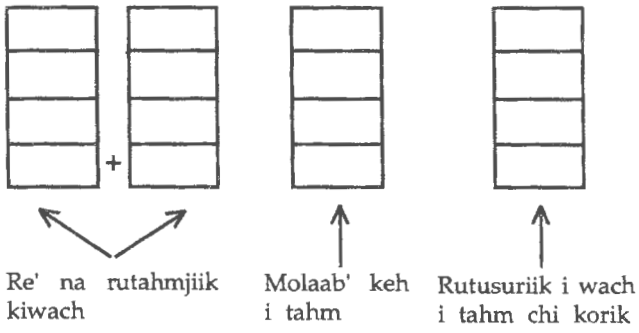
$$
\begin{array}{r}
64{,}964 \\
10{,}045 \\
46{,}101 \\
+\ \ 8{,}418 \\
\hline
64{,}964
\end{array}
$$

64,964 chi kintaal xi'eel ch'i kunchilaal taqe i wach rutik i ma' Wiich, reh chi na reht'aliim chi korik i xuq'or i tahm, xunik'eej wach mi korik i xeel chu wach.

Re' tahm kuuk' taqe ehtaal ajlanik pan maaya.

Reh rub'anariik i tahm, kuuk' taqe ehtaal ajlanik pan Maaya, je' wilih inb'anarik reh:

• Ku ruman chi na atob'eem awiib' kuuk' taqe kajtz'u'k je' wilih:



•• Kikojorik taq k'ihaal ehtaal ajlanik chi kipaam taqe peet kajtz'u'k, chi ju'jun chi ehtaal pan kilok'iil.

••• Reh rutahmjiik kiwach na rutik'i'jiik chi kipaam taqe lok' re' keh taqe ju'jun.

•••• Inmoljik kiwach taqe ehtaal chu paam i roox kajtz'u'k, pan kilok'iil.

—— Intiq'i'jik kiwach chi je' wilih:

- Mi re' tz'uhr xiik' kinaah chi kejeb' chu paam i jenaj lok' kikorjik juuch'.

- Mi re' taqe juuch' iniik' kinaah chi ixeb' chu paam i jenaj lok', kikorjik tz'uhr chu paam i lok' wilik johtoq wach naah i lok' wilkeeb' wii'.

Re' wilih na ruk'amariik naah reh i tz'ihb' taqe ehtaal ajlanik maaya.

• Mi xraqjik ho'oob' tz'uhr chu paam i jenaj lok', inkojarik jenaj i tz'uhr chi jalob'aal, chu paam woo i lok' re' re'.

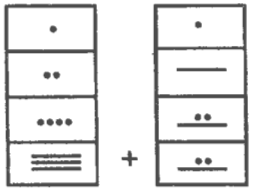
•• Lok' na qaq'orom keh taqe kuk' kajtz'u'k ye'aab' aha' kikojarik wii' taqe ehtaal ajlanik Maaya, k'oloq pan qak'ux chi ayu' jenaj lok' kijohtik wii' injalaaj jarub' inkaaj kiq'orom.

••• Irub'an chi ne' kikojarik ixib' juuch' chu paam i jenaj lok', mi xiik' naah chi ixeb', kikorjik tz'uhr eh inkojorik chu paam i lok' wilik wach naah.

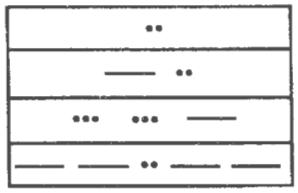
Ehtaal 1.

Kiib' taqe chi k'achareel kichaaq' kiib' xkik'ayej taqe kichikoop, jenaj xuk'ayej reh • : ⁞ ||| (8,895) chi chikop, re' jenaj xuk'ayej • | :| :| (10,147) chi chikop, yu'nah inkaaj keht'aliim jarub' xkik'ayej chi kunchilaal. Chih jarik na qab'anam reh reht'aljiik jarub' chi chikop xkik'ayej pan kikab'cheel?

Ayu' na qab'anam i tahm, qil nik' wach na b'anaroq.



Re' na rutahmjiik kiwach



Molaab' keh i tahm

Rutusuriik i wach i tahm chi korik

Qil nik' wach noq xooj aloq wii' wach.

Yu'nah na qak'ihalb'isam re' taqe ehtaal wilkeeb' chu paam taqe lok' jarob' pa' pech iruq'or i ye'aab' wilkeeb' wii'.

Na qatik'aa'm ruuk' i lok' wilik k'ixkaab':

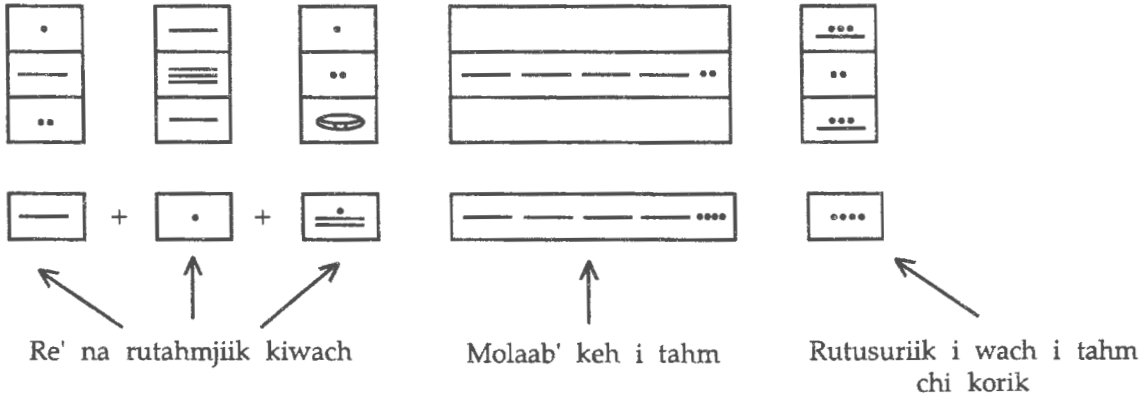
- 2 pech i 1 jenaj wach 2 (re' lok' wilih, 1 kitz'aaq taqe ehtaal ki'okik chu paam);
- 12 pech i 20 jenaj wach 240 (re' lok' wilih, 20 kitz'aaq taqe ehtaal ki'okik chu paam);
- 7 pech i 400 jenaj wach 2,800 (re' lok' wilih, 400 kitz'aaq taqe ehtaal ki'okik chu paam);
- 2 pech i 8,000 jenaj wach 16,000 (re' lok' wilih, 8,000 kitz'aaq taqe ehtaal ki'okik chu paam).

Eh ne' inqamol kiwach chi'nchel taqe k'ihaal xqil cho wach inponik, 19,042.

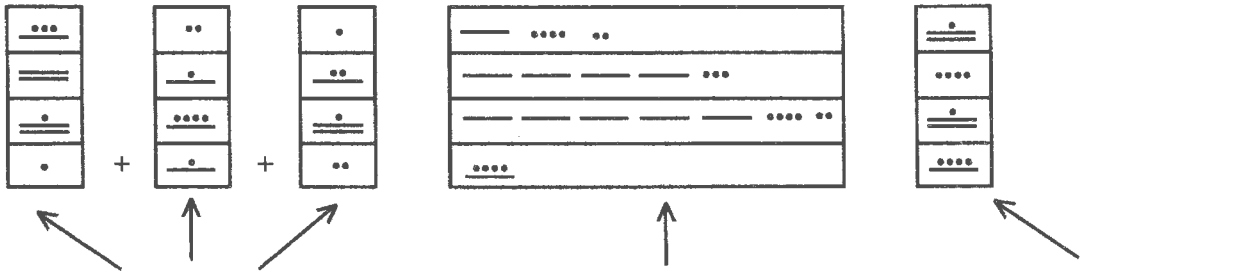
2 x 8,000		+ 16,000
7 x 400		2,800
12 x 20		240
2 x 1	=	2
Xtahmik		19,042

Re' kikab'cheel taqe chi ak'unb'ees xkik'ayej : •| :‖ : (19,042) chi chikop.

Ehtaal 2.



Ehtaal 3.



Re' xq'orjik.

Re' i tahm kuuk' taqe ajlanb'al Araaw, kimoljik pan keh i ju'junaal, pan keh i lajtaqiil, pan keh i ho'k'ahliil, mi xponik kiib' kiwach taqe ehtaal ajlanb'al chu paam i jenaj lok', xa re' wo' reh i ju'jun inkojarik eh re' i keh i lajtaqiil inooj chu paam i lok' inchaal.

Re' reht'aljiik mi korik i tahm xqab'an, intahmjik wo' chik wach, intik'i'jik cho chi ri'sil eh inooj johtoq taxaaj, re' jarub' ineel inkojarik wach kinaah taqe ajlanb'al, re' i wilih jenaj wach na reliik ruuk' i tahm xelik chi qawach k'ixkaab', ma' jenaj wach xeel, iraaj ruq'orom chi ma' holohik ta wach i tahm xqab'an.

Re' i tahm inb'anaar kuuk' taqe ajlanb'al Maaya, re' rumoljiik kiwach taqe ju'junaal pan keh, re' rumoljiik kiwach taqe juninaqiil pan keh, re' rumoljiik kiwach taqe juniq'ob'iil pan keh, ku ruman na qatob'eem qiib' ruuk' jino'q kajtz'u'k reh b'anaj tahm, maj wilkeeb' taqe ju'jun tz'uhr na kikorjiik juuch', wilkeeb' taqe ju'jun juuch' na kikorjiik tz'uhr eh na kijohtiik junlok' chik wach naah i ye'aab' aha' wilkeeb' naq wii'.

Kamanik

Yu'nah chi xqil chik wach i rub'ehil nik' wach inb'anarik taqe tahm qab'an taqe i wilih wilkeeb' chi qawach.

1. Pan k'ayb'al reh Chi' Chooh jenaj winaq 70 kintaal ixiim iruk'aay, re' jenaj chik 90 eh wilik jenaj chik 60. Jarub' kintaal kik'aay chi kunchilaal koxcheel taqe winaq?

2. Jenaj Aj Kurus xuk'ayej 85 chi chamaar pan peet xamaan, pa rukab' 28, pa roox 76, eh pa rukuxiik chik xuk'ayej 87. Jarob' chi chamaar xuk'ayej chu wach i kejeb' xamaan?

3. Pan jenaj tiq'aab' xun reh tinamit Chib'aatz' xkiyejaa' 2,454 chi xun chu wach i poh eneer, chu wach i poh peb'reer xkiyejaa' 1,799, eh chu wach i poh maars xkiyejaa' 3,281 chi xun. Jarob' chi xun xkiyejaa' chu wach i ixeb' poh?

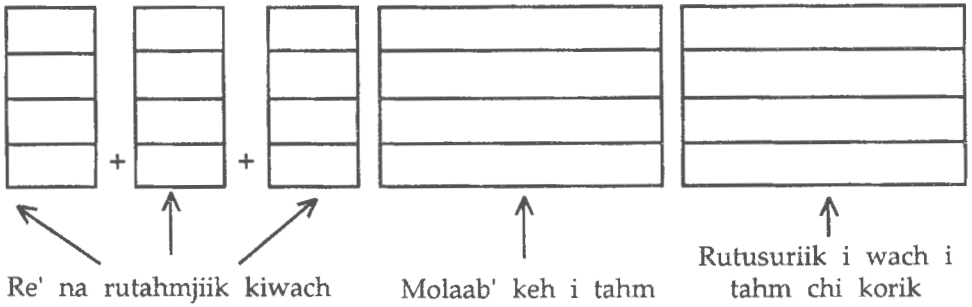
4. Chu paam i ajlanb'al q'iij Maaya jenaj Tun wilik reh 360 q'iij, jenaj Katun wilik reh 7,200 q'iij eh jenaj B'aqtun wilik reh 144,000 q'iij. Jarob' chi q'iij xqaq'or chi kunchilaal?

5. Reh ruloq'oriik 2 kintaal chi kinaq' ajwaal wach 650 q'uuq' tumiin, reh ruloq'oriik 3 kintaal chi papa ajwaal wach 540 q'uuq' tumiin, reh ruloq'oriik 3 kintaal arb'eej ajwaal wach 955 q'uuq' tumiin. Jarob' chi tumiin ajwaal wach reh kiloq'oriil chi'nchel taqe xq'orjik?

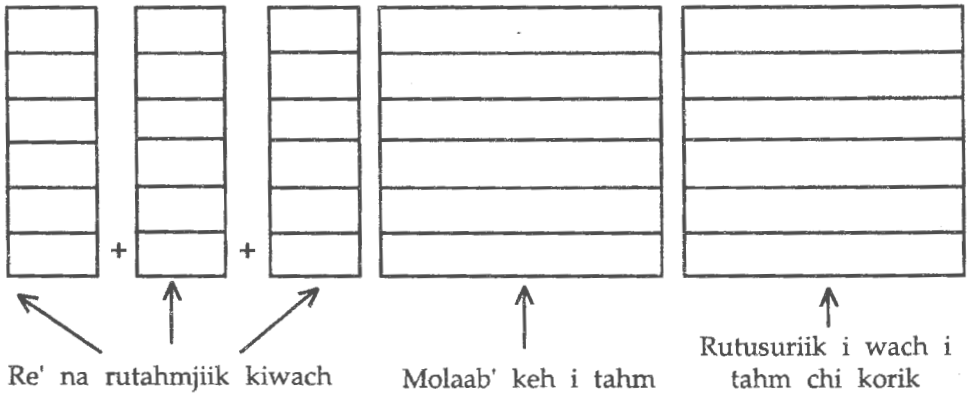
Kamanik ...

Yu'nah chi tichol chik rub'anariik tahm kuuk' taqe ehtaal ajlanb'al Maaya, chab'an taqe tahm inye'jik aweh ayu'.

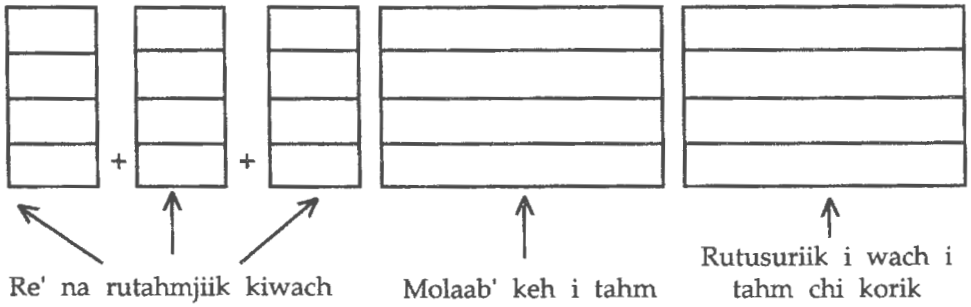
1. Ixib' taqe nimaq taq kinaah yuuq' wilkeeb' ayu' nah ak'al: Re' "Everest" 8,848 meetr najtiil naah, "Godwin Austen" 8,611 eh "Kanchen Yunga" 8,501. Chawisaj i hat jarob' ne' inooj aloq chi'nchel najtiil kinaah i yuuq' mi xqamol kiwach taqe ixeb'.



2. Ixib' taqe re' ruuk' taqe 94 kuk' seht ak'al sutumaj ru'uum ha' je' wilih kilomeetr kinimaal. "Papua reh Nueva Guinea" 828,025 kajtz'u'k chi kilomeetr nimaal, "Awstralia" 7,618,517 kajtz'u'k chi kilomeetr nimaal, eh "Groenlandia" 2,175,600 kajtz'u'k chi kilomeetr nimaal. Chawisaj i hat nik' nimaal naq ne' inooj aloq ne' ta inqamol kiwach oxcheel.



3. 3 re' kiruuk' taqe rooq ha' nimaq kooq, wilkeeb' nah ak'al: "Nilo" 6,671 kilomeetr rooq, re' "Amazona" 6,437 kilomeetr rooq eh re' i "Chang Jianq" 6,380 kilomeetr rooq. Xqak'u'lej ta kiwach koxcheel taqe rooq ha' re' re', nik' naq nimaal ne' ki'ooj aloq wii' chi'nchel?



Pajoj iib'.

¿Chih jarik na rub'anam jino'q aj tik iraaj reht'aliim jarub' i wach rutik irisaj?

¿Chih jarik kib'ihnaal taqe ye'aab' inb'ehsjik wach reh i tahm?

¿Chih jarik iraaj b'anarik reh reht'eljiik mi korik wach i tahm xqab'an?

Mi chu paam i jenaj lok', ne' ineel kiib' oon k'ih wach chi ehtaal ajlanik, ¿Chih jarik iraaj b'anarik?

Mi xkiq'or qeh chi na qab'anam juno'q i tahm, eh xkiyew qeh ehtaal ajlanik pan Maaya, eh ne' inkiq'or qeh chi na qab'anam pan Araaw. ¿Chih jarik ne' inqab'an?

Ruwaaq Ch'uq
Re' rub'anariik i maq'ooj (q'uchuuj) pan taq ajlanb'al maaya eh araaw

Re' ajwaal wach chi na rutijiljiik:

Rukojoriik chi korik i rub'ehil i maq'ooj on q'uchuuj wo' inq'orarik reh, pan ajlanb'al Maaya eh Araaw.

Elik pan k'axkiil ruuk' rukojariik chi korik i rub'ehil i maq'ooj pan ajlanb'al Maaya eh Araaw.

Tik'aab' reh.

Je' rukab' x'ajawjik wach jino'q rub'ehil i rumolariik kiwach taqe nik' nimaal inkaaj ajaljik, je' wo' re' ajwaal wach reht'eljiik wach i rub'ehil i maq'ooj.

Re' maq'ooj kuuk' taqe ajlanb'al araaw.

Re' maq'ooj, re' inb'anarik reh reht'eljiik nik' k'ihaal injohtik jenaj ajlanb'al k'ih iruq'or, ruuk' jenaj chik ajlanb'al ma' k'ih tah iruq'or, chi je' re' inraqjik i ruqohx.

"Re' ehtaal kojooj reh ruq'orjiik i maq'ooj, inraqjik chu wach jenaj najtir huuj reh "Rhind", je' rukab' inkitz'ihb'aaj naq taqe Aj "Egipto" ( ). Inq'orjik chi reh taqe ehtaal inkojorik reh ruq'orjiik Tahm oon Maq'ooj, xwuktik cho wach kuuk' taqe najtir ajk'aay, maj inkikoj b'ila' naq rehtaal Tahm (+) oon rehtaal Maq'ooj (-) chu wach taqe kik'aay, pa' irub'an inkil, mi k'ih oon ma' k'ih chu wach inku'eej naq riljiik". 2 (p70).

Re' wilih taqe aha' reh i maq'ooj:

Ehtaal →	1,543	←	Maq'b'al
Maq'ooj	- 1,286	←	Maq'ool
	0,257	←	Ruqohx

Noq jenaj i ehtaal ajlanik reh i Maq'bal, k'isiin chu wach i reh i maq'ool, ne' inqakimleej jino'q reh i lok' wilik chi rucheel eh ne' nqakoj akoq chi ruman i ehtaal ajlanik reh i Maq'b'al. K'oloq pan qak'ux chi aha' xqakemelej wii' i jenaj re' re', jenaj chik i ma'xta reh.

Ehtaal 1.

Qeht'aliim chik nimaal naah 2 taqe yuuq' kutul q'aaq', re' i til nim naah re' inq'orjik reh "ojos del Salado" 6,893 meetr nimaal naah eh re' jenaj chik re "Barva" inq'orjik reh, 2,906 meetr naah. ¿Nik' nimaal iniik' i nim laj yuuq' wach naah i k'isiin?

6,893 - 2,906 3,987	Re' nimaal iniik' i yuuq' nim wach naah i k'isiin re' 3,987 meetr.

Ehtaal 2.

Mi re' jenaj tinamit ruuk' taqe kajchel ruch'eq, 2,134 chi k'achareel wilkeeb' chu paam, eh mi xqisaj i k'ihaal reh jenaj reh kajch'eq 461 chi k'achareel. Jarub' chik ne' kikahnik?

2,134
- 461
1,673

Re' taqe k'achareel ne' kikahnik chi k'acharik pa rooxch'eq, 1,673 k'ihaal.

Ehtaal 3.

Re' ma' Waan wilik naq reh 2,352,000 kintaal chi kapeh eh wuk'ayej 703 kintaal. Jarub' chik xkahnik reh i ma' Waan? Reh reht'aljiik i wilih na nusik'im ruuk' i rub'ehil i maq'ooj.

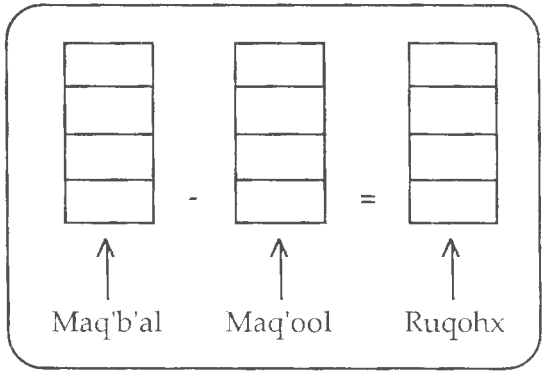
2,352,000
- 703
2,351,397

Mi ma' nim tah i ajlanb'al aj'eh na nub'am wii' i maq'ooj, eh ma' inmahnik tah maj nim i maq'ool, na nukimleem reh i lok' wilik chi riij, mi ma'xta reh i ruch'iil re' re', na nukimleem reh i jenaj oon xareh taqe ruch'iil wilkeeb' jeh chi riij ku rehtaal na ruponiik oon rik'iik naah chu wach i reh i maq'ool.

Re' maq'ooj kuuk' taqe ajlanb'al maaya.

Reh i maq'ooj, intik'i'jik kuuk' taqe i ju'jun, qak'am reh i rub'ehil i tahm.

- Ku ruman chi na qatub'eem qiib' kuuk' taqe kajtz'u'k.



- Re' taqe maq'b'al kikojorik pan qatz'eet eh re' taqe maq'ool pan qasak'aaj.

••• Mi chi kunchilaal taqe maq'b'al nimaq taqe chi kiwach i maq'ool, inb'anarik i maq'ooj chi ma'xta k'axkilal.

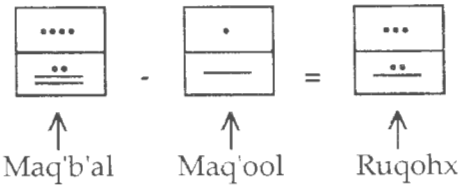
•••• Mi wilik juno'q ehtaal ajlanik reh i maq'b'al ma' nim tah chu wach i reh maq'ool, re' i keh maq'b'al irukimleej johtoq jenaj ruuk' i lok' wilik wach naah, mi jenaj tz'uhr xkimiljik , inkorjik kejeb' chi juuch' oon ixeb' chi juuch' eh ho'oob' chi tz'uhr.

— Reh kitz'ihb'jiik chi korik re' taqe i tz'uhr kikorjik juuch' chu paam i lok' wilik wach kinaah mi iniik' kinaah chi kejeb', re' taqe juuch' kikorjik tz'uhr chu paam i lok' wilik wach kinaah mi iniik' naah chi ixeb.

—• Reh rutusuriik kiwach taqe ehtaal pa rukuxiik, na rub'anariik reh je' rukab' xb'anarik chu paam i tahm.

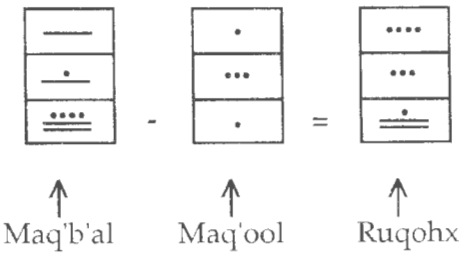
Ehtaal 1.

Re' qatu' Mar wilik naq reh ⁝ :‖ (92) kintaal chi ixim, eh xkelq'aaj reh • | (25). Jarub' chik kintaal xkahnik ruuk' qatu' Mar?



Ehtaal 2.

Mi pa rusehtiil naah tinamit "Baja Verapaz" wilkeeb' tah quuk' 2,134 chi tijineel reh chi na ruye'jiik kitijiniik, eh chu wach i haab' kikahnik aloq 461 chi tijineel. Jarob' chik chi tijineel ne' kikahnik?



Chi riij chik i ki'eliik taqe 461 chi tijineel, xikahnik 1,673 chi tijineel.

Ehtaal 3.

Re' ma' Miil wilik naq reh 2,090 chisuqtaaj wach ruchee' (mansaan) noq xril chi re' taqe ajk'uhtuneel k'ahche'keeb' chi ninq'ijinik reh i ruq'ijil i ha'lak'un, xusiij keh 703. Jarub' chik chi mansaan xkahnik ruuk' ma' Miil?

Chu paam i maq'ooj wilih xqakoj rehtaal chi wilkeeb' taqe ehtaal ajlanik reh i maq'b'al ma' nim tah chu wach i reh maq'ool, re' i keh maq'b'al irukimleej johtoq jenaj ruuk' i lok' wilik wach naah, re' xb'anarik pa roox lok' xkorsjik chi ho'oob' tz'uhr i juuch' xkimiljik chik kejeb' tz'uhr xikahnik, eh re' tz'uhr xkimiljik, xkorsjik kejeb' juuch' chu paam i lok' wilik chi ri'sil. Chi riij i wilih xb'anaar, xb'anarik i maq'ooj.

Re' xq'orjik.

Re' maq'ooj xtz'uskrik cho najt'r toh reht'aljik nik' numaal inik' jino'q k'ihaal, wach naah jino'q chik xa ma' k'ih tah.

Re' maq'ooj kuuk' taqe ajlanb'al pan Anaw. inb'anarik i maaq' xa chi kiwach taqe ehtaal ajlanik, xare' iraaj iljik chih jarik lok' wilkeeb'

wii'. Intik'i'jik kuuk' taqe i wilkeeb' chu paam i lok' reh i ju'jun, noq jenaj i ehtaal ajlanik reh i Maq'bal, k'isiin chu wach i reh i maq'ool, ne' inqakemelej jino'q reh i lok' wilik chi rucheel eh ne' nqakoj ikoq chi ruman i ehtaal ajlanik reh i Maq'b'al. K'oloq pan qak'ux chi aha' xqakimleej wii' i jenaj re' re', jenaj chik xqajik wach.

Re' maq'ooj kuuk' taqe ajlanb'al pan Maaya, inb'anarik i maaq' xa chi kiwach taqe ehtaal ajlanik, wilkeeb'chu paam i jenaj wach lok'.

Intik'i'jik kuuk' taqe i wilkeeb' chu paam i lok reh i ju'jun. K'oloq pan qak'ux chi ayu' xe ruman chi na qatub'eem qiib' kuuk' jenaj kajtz'u k.

Wilik pech noq ko ruman chi na qatebem wach chi korik noq re' juno'q ehtaal ajlanik reh i maq'b'al ma' nim taq chu wach i reh maq'ool, re' i keh maq'b'al irukemelej jolonoq jenaj kuuk' i lok' wilik wach naah. ini jenaj tz'uhr xkemeljek , inkorjik kejeb' chi juuch oon ixeb' chi juuch' eh ho'oob' chi tz'uhr

Kamanik ....

Chab'an taqe maq'ooj wilkeeb' je chi qawach

1. Jenaj ajtik xusik' 45,756 aroow ixim, eh xuk'ayej reh i ruka'jaah 6,471 aroow. Jarub' chik aroow xkahnik ruuk'?

2. Jenaj haaw xuloq' 78,569 liiwr chi tokaan, eh xuk'ayej 15,499 liiwr eh pan kixelek taqe rukomoon eh ruch'iil xkik'ux 101 liiwr. Jarub' chik liiwr chi tokaan xkahnik ruuk' i haaw?

3. Jenaj ye'aab' wakax wilik "Escuintla" wilkeeb' naq chu paam 2,645 chi wakax, pan jenaj q'iij, re' ehchen reh, xuk'ayej 987. Jarub' chik chi wakax xkahnik chu paam i ye'aab' re' re'?

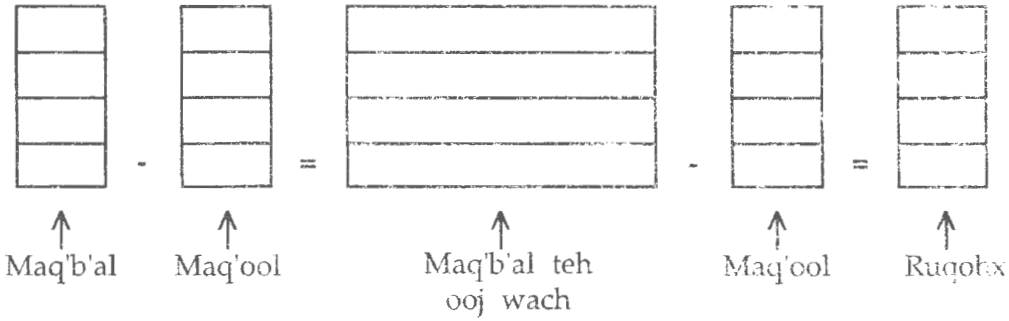
4. Jenaj ajamaneel in'ajamanik 35 kilometr chu wach i q'iij, eh pan jenaj q'iij ma' xrajameej tah wach je' re' najtiil, xa 19 kilometr tiij xub'an. Jarub' chik kilometr ma' xrajameej tah wach?

5. Jenaj ajk'aay si' ruk'ayej 3,885 ehq chi si' chu wach jenaj poh, eh re' jenaj chik ruch'iil xaa 2,105 ehq chi si' iruk'ayej chu wach i poh. Nik' k'ihaal iniik' wach naah i ma' k'ih tah ruk'ayej ruuk' i ma' k'ih tah iruk'ayej?

Kamanik

Yu'nah chi tichol chik rub'anariik i maq'ooj kuuk' taqe ehtaal ajlanb'al Maaya, chab'an taqe maq'ooj wilkeeb' chi qawach.

1. Chi kiwach taqe nimaq kooq yuuq' wilkeeb' nah ak'al, ki'ib' taqe til iniik' wo' chik wach kinaah taqe kuch'iil, re' nimaal rooq yuuq' "Los Andes" 10,000 kilomeetr rooq, eh re' jenaj chik re' i "Pirineos", re' wilih 430 kilomeetr rooq. Nik' nimaal iniik nimaal rooq i "Los Andes" chu wach i nimaal rooq i "Pirineos".



2. 2 Seht taqe chi ak'al chiqiij kiwach re' kiruuk' taqe nimaq wilkeeb' wach naah ak'al. Re' chiqiij wach ak'al "Sahara" 9,100,000 kajtz'u'k chi kilomeetr nimaal, eh re' chiqiij wach ak'al "Nubia" 260,000 kajtz'u'k chi kilomeetr nimaal. Chareq nik' nimaal iniik' i seht chiqiij ak'al nim wach naah i k'isiin.

Chayejaa' taqe akajtz'u'k reh chi ne' na atub'eej awiib'.

Pajoj iib'.

Chatz'ihb'aaj kib'ihnaal taqe aha' reh i maq'ooj.

Mi re' maqb'al k'isiin chu wach i maq'ool. Chih jarik na rub'anariik?

Ajwach taqe xikojarik cho reh chi peet i rehtaal i maq'ooj.

Nik' wach je' noq x'uksjik cho wach rehtaal maq'ooj ruch'iil i rehtaal tahm.

Chih jarik inqatub'eej wii' qiib' reh rub'anariik i maq'ooj kuuk' taqe ajlanb'al Maaya.

Nik' inqateh wach chi korik taqe ehtaal ajlanik chu paam i maq'ooj.

Ruwuuq Ch'uq
Re' rub'anariik i k'ihalb'isanik pan taq ajlanb'al maaya eh araaw

Re' ajwaal wach chi na rutijiljiik:

Rukojariik chi korik i rub'ehil i k'ihalb'isanik pan ajlanb'al Maaya eh Araaw.

Elik pan k'axkiil ruuk' rukojoriik chi korik i rub'ehil i k'ihalb'isanik pan ajlanb'al Maaya eh Araaw.

Tik'aab' reh.

Re' rub'anariik i k'ihalb'isanik til ruyew ruk'axkiil chi kiwach taqe najtir k'achareel "griego" ku rehtaal inkitub'eej kiib' ruuk' jenaj i tz'elom "pictórica" b'ihnaal, eh inkiq'or ajik chi xakeht'aliim woo chik wach noq majaa' inasjk tah jenaj i ye'ol na'ojb'al pan ajlanb'al, re' i "Pitágoras" b'ihnaal.

Re' taqe aj tinamit "Babilonia" tz'elom kajtz'u'k inkikoj, chi kiwach taqe romaan re' b'anooj k'ihalb'isanik k'axik eh q'uun, kijohtik q'iij chi rub'anariik. Re' rehtaal i k'ihalb'isanik (X) inq'orjik chi re' i "W. Oughtred" uksunik cho wach chu paam i haab' 1,647.

Xtiq'i'jik ajik wach i k'ihalb'isanik chi korik maj ma' manlik tah inkik'raaj chi inooj aloq i keh, maj re' i k'ihalb'isanik je' wo' rukab' i tahm, xare' la' ma' najt tah rooq inooj aloq.

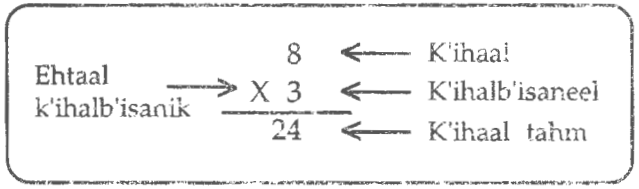
Re' rub'anariik i k'ihalb'isanik kuuk' taqe ajlanb'al araaw.

Re' k'ihalb'isanik aj re', inb'anarik reh rureqjiik re' kik'ihaal tahm taqe kab'chel ch'uq chi ehtaal ajlanik insik'irik kiij, maj re' i wilih je' wo' rukab' i tahm xa re' la' ayu' ink'isinb'isjik rooq.

Re' i k'ihalb'isanik inye'jik chi rehtaal ruuk' i X oon ruuk jenaj Σ pan kiyejaal taqe ch'uq ehtaal chi ajlanik na rusik'iriik kiij.

Ruuk' i k'ihalb'isanik inqakol naab i qaq'iij, qahuuj, qaye'aab, maj re' naq taqe k'ihaal ch'uq chi ehtaal na rutahmjiik naq wach chi kiju'junaai, kik'ihalb'isjik chi xaruuk' kiib' ch'uq chi ehtaal ajlanik.

Re' taqe aha' reh i k'ihalb'isanik.



Re' ajlanb'al xqak'ihalb'isaj re' i k'ihaal (8); re' inq'orwik qeh jarob' pech xqak'ihalb'isaj re' i k'ihalb'isaneel (3). Re' ineel chi kiwach i wilih re' i k'ihaal tahm (24).

Ehtaal 1.

Wilkeeb' weh 546 kintaal chi pooq q'olb'al tz'aq, 23 q'uuq' tumiin kitz'aaq i ju'jun. Jarub' naq ne' nqamol wach ne' tah inuk'ayej ch'inchel je' rukab' tz'aaq xnuq'or?

$$\begin{array}{r} 546 \\ \times\ 23 \\ \hline 1638 \\ +1092 \\ \hline 12{,}558 \end{array}$$

* Ne' naq nqamol wach 12,558 q'uuq' tumiin.

Reh ruk'ihalb'isjiik kiwach taqe ehtaal ajlanik k'ihaal, peet na nuchopom naah i ehtaal ajlanik reh i k'ihalb'isaneel wilik chu paam i lok' keh taqe ju'jun, re' jarob' pa' ne' ineel i wilih ne' inukoj chi peet, chi ri'sil chik i wilih ne' nukoj re' taqe ki'eel noq inchop naah i ehtaal ajlanik reh i k'ihalb'isaneel wilik chu paam i lok' keh taqe lajtaqiil. Inb'anam chik i wilih ku re' ne' numol kiwach eh re' chik i k'ihaal tahm i wilih.

Ehtaal 2.

Jenaj i chooh re' ruuk' i nim wilik nah ak'al, re' i "Baikal" reh "Rusia" wilik reh rusehtiil 31,500 kajtz'u'k chi kilomeetr. Mi xqalajeeb'pechej (X 10) i chooh wilih, nik' naq nimaal ne' inooj aloq?

Qil jarob' naq ne' inooj aloq.

$$\begin{array}{r} 31{,}500 \\ \times\ 10 \\ \hline 315{,}000 \end{array}$$

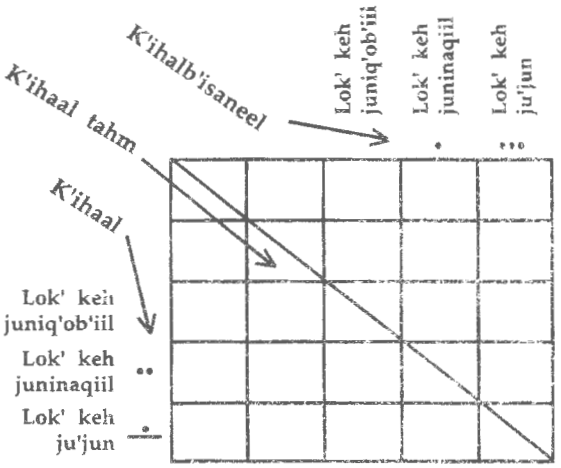
* Je' wilih nimaal ne' inooj aloq: 315,000 kajtz'u'k chi kilomeetr.

Noq re' peet k'ihalb'isaneel re' i "0" xa inkojorik akoq jenaj i 0 kuuk' taqe ehtaal na qak'ihalb'isaneh eh je' re' ne' ineel chi qawach chi junpech.

Re' rub'anariik i k'ihalb'isanik kuuk' taqe ajlanb'al maaya.

Reh rub'anariik i k'ihalb'isanik ku ruman chi na qakojom pa ruman taqe inq'orjik ayu':

• Jenaj i kajtz'u'k je' rukab' i ehtaal wilih.



•• Reh b'anooj k'ihalb'isanik inkojorik i k'ihaal pan rutz'eet i kajtz'u'k eh re' i k'ihalb'isaneel inkojorik taxaaj pa rusak'aaj i kajtz'u'k.

••• Re' rehtaal jarob' pa' pech inuq'or i k'ihalb'isaneel, inkojorik i k'ihaal, chu paam taqe i kuk' kajtz'u'k. re' aha' inkik'ul wii' kiib' re' inchaal taxaaj ruuk' inooj pan yokdik.

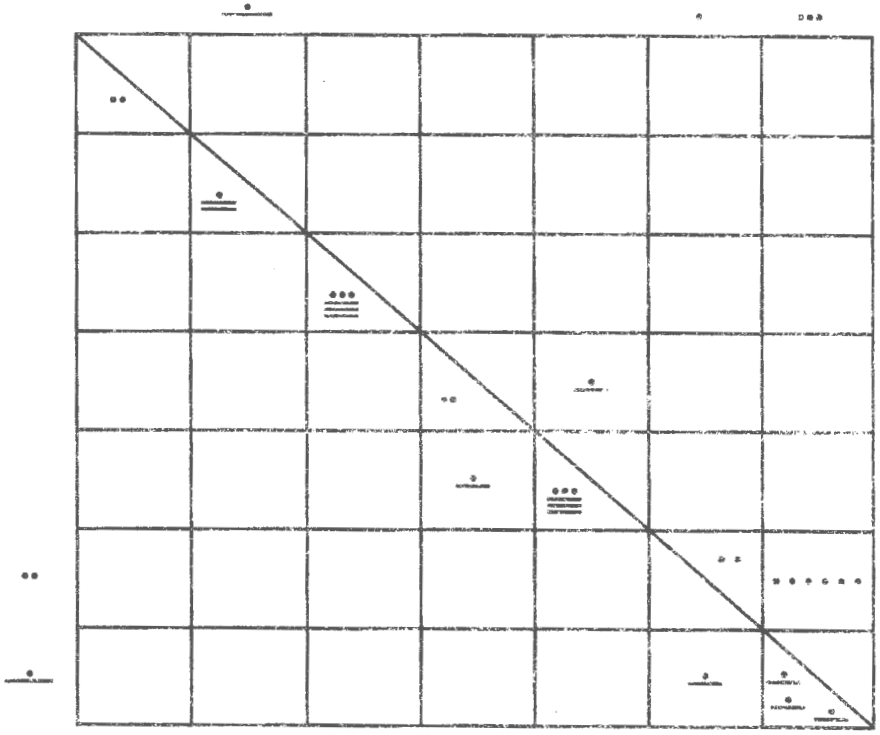
•••• Noq wilkeeb' chik taqe ehtaal chu paam taqe kuk' kajtz'u'k, inmolorik eh intz'ihb'jik kiwach chi korik chu paam i kajtz'u'k reh i k'ihaal tahm.

—— Noq inolooj chik kiwach kitz'ihb'jik chu paam i kajtz'u'k wilik pa rub'ehil i q'e'lik juuch'

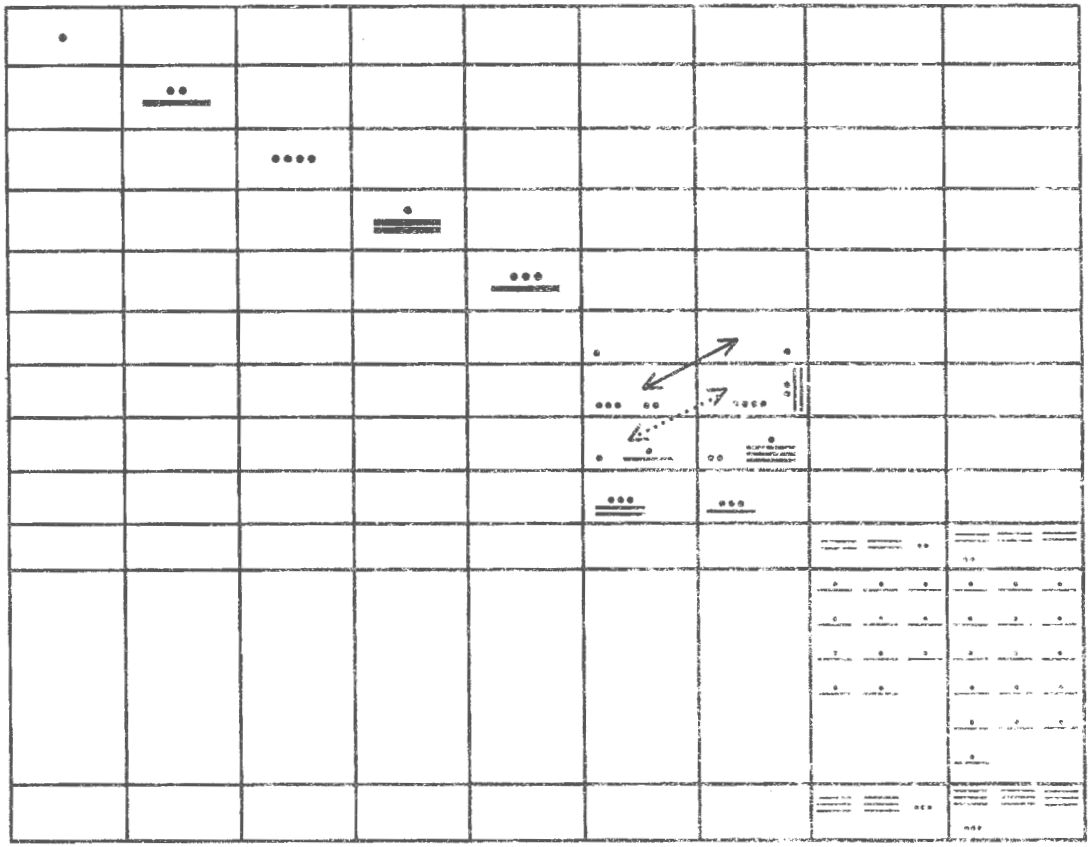
—• Re' taqe ehtaal ma' wilkeeb' tah chu paam i kuk' kajtz'u'k wilkeeb' pa rub'ehil i q'e'lik juuch, inmolorik kiwach ruuk' i wilkeeb' chi kicheel pan q'e'lik, ku re ki'ik'sjik pan ruk'ajtz'u'k wilik pa rub'ehil i q'e'lik juuch'.

—•• Mi majaa' inpoon tah wach chi korik, ku iraaj ye'erik jeh je' rukab' inkiq'or taqe i tz'ihb' wilkeeb' wach naah i wilih.

Ehtaal 1.



Ehtaal 2.



Qil nik' wach noq xb'anaar reh.

- Peet, xik'ihalb'isjik taqe reh peet lok' reh i k'ihal ruuk' i k'ihalb'isaneel, ku re' xk'ihalb'isjik i keh taqe i rukab' lok.

•• Re' jarob' xi'eel, xtz'ihb'jik chu paam i k'isa kajtz'u'k aha' iruk'ul wii' riib' i ye'aab' aha' wilkeeb' wii' cho.

Re' taqe mohl keh taqe ajlanb'al xa manlik taqe.

Chu paam i peet mohl wilih xb'anarik i peet ruteheriik kiwach.

- Xmolorik kiwach chi kunchilaal, re' i xiik' naah chi juninaq xjohtik chi tz'uhr chu paam i lok' wilik wach kinaah, eh chu paam i k'isa kajtz'u'k keh i juninaqiil, re' i xiik' naah chi juninaq xjohtik chu chi tz'uhr chu paam i lok' keh i juniq'ob'il.

Re' taqe mohl keh taqe ajlanb'al nim wach inkiq'or.

Re' wilih xb'anaar reh kitz'ihb'jiik chi korik. Re' ayu', re' taqe tz'uhr xikorjik juuch', chu paam i k'isa kajtz'u'k wilik wach kinaah. Ayu ineel chi korik i k'ihaai tahm, ink'utunik pan q'e'lik, re' chakoj rehtaal i juuch' q'e'lik.

- Inchoporik chi jenaj tz'aaq i re' i wilik pan peet lok' eh ma' k'uhtumaj tah chi ehtaal ch'aab'.

•• Xmolorik kiwach taqe wilkeeb' naq chu paam i k'isa kajtz'u'k iruk'am rub'ehil i juuch' q'e'lik. Re' xmolorik wach eh xiik' naah chi juninaq xkorjik jenaj eh xjohtik pa rukab' lok' iruk'am rub'ehil i juuch q'e'lik eh re' wilkeeb' naq pan juninaqiil xijohtik pa roox lok'.

••• Xmolorik kiwach eh xikorsjik re' taqe wilkeeb' naq chu paam i k'isa kajtz'u'k k'uhtumaj ru'uum i rehtaal ch'aab' yok'ooj. Re' ruqohx i jarob' xelik xtz'ihb'jik pa roox lok' eh re' kipoon juninaq chu paam i rukaaj lok'.

•••• Xmolorik kiwach eh xikorsjik taqe k'uhtumaj ru'uum i rehtaal roox ch'aab'. Re' jarob' xelik xtz'ihb'ji pa rukaaj lok'.

—— Re' i xam, ma' k'uhtumaj tah, inooj aloq chi re' i roo' lok'.

Re' xq'orjik.

Xtiq'ib'jik cho wach i k'ihalb'isanik aj, maj re' taqe k'achareel inkaaj kikolom i kiq'iij, ye'aab', reh rub'anariik i tahm chi xa ma' najt tah na rojiik eloq.

Re' ajwaal wach ruuk' i k'ihalb'isanik, re' rub'anariik i tahm eh rureqariik chi xa re' yu' i k'ihaal tah chi.

Ma ko ruman tah ne kitusurik taqe k'ihaal ehtaal ajlanik chi kunchilaal.

Reh rub'anariik i k'ihalb'isanik ruuk' taqe ehtaal ajlanik pan Maaya, ku ruman chi na qatub'eem qiib' ruuk' jenaj kajtz'u'k q'atooj paam. Kikojorik taqe ehtaal ajlanik ki'okik chu paam i k'ihalb'isanik, jenaj inooj wach naah i kajtz'u'k pa rusak'aaj, eh re' jenaj chik inooj pa rutz'eet i kajtz'u'k k'ixkaab', re' jarub' ineel intz'ihb'jik chu paam i k'isa kajtz'u'k aha' inkik'ul wii' kiib' taqe i kiye'aab' taqe k'ihaal k'ahchi' kik'ihalb'isam kiib'.

Kamanik

1. Jenaj tiq'i'neel paat irukoj 206 chi xaan chu wach i jenaj q'iij. Jarub' naq ne' rukoj chu wach i 15 q'iij?

2. Jenaj Kawaay 7 kaloon i ha'iruk'ej chu wach i jenaj q'iij. Jarub' naq kaloon ne' inki'uk'ej taqe 75 chi kawaay?

3. Jenaj tuut irukeem 13 chi po't chu wach i jenaj haab'. Jarub' chi po't ne' rukeem chu wach i 15 haab'?

4. Jenaj aj Sakapula iruyejaa' 25 chi chakach chu wach i jenaj poh. Jarub' naq chi chakach ne' inkiyejaa' wach 115 ta naq taqe chu wach i jenaj poh?

5. Jenaj q'ahxoq aj San Peer, irusik' 375 yuht chi uhtz'ub' chu wach jenaj q'iij. Jarub' naq yuht chi uhtz'ub' ne' inkisik' chu wach i 3 q'iij 86 chi q'ahxoq?

Kamanik

Yu'nah chi qohchol chik k'ihalb'isanik kuuk' taqe ehtaliil ajlanb'al pan Maaya, qab'an taqe inq'orjik qeh chi qawach.

1. Mi re' jenaj sutuun teew inb'ehik 119 kilomeetr chu wach i jenaj junk'aam. Jarub' naq kilomeetr ne' inb'ehik chu wach i 8 q'iij?

2. Re' i yejaal chi'nchel runimaal ak'al kojk'acharik wii' 12,756 kilomeetr. Jarub' naq ne' ineel ne' tah inqak'ihalb'isaj 21 pech?

3. Re' najtiil i k'een poh ruuk' i qak'aliil 384,392 kilomeetr. Wilik tah 25 pech chik i najtiil wilih. Nik' naq najtiil wilkooj wii' ruuk' i qak'een poh?

4. Re' b'eheneel ch'umiil (Cometa Hale – Bopp) irusutej wii' riij i q'iij ruuk' 2,500 haab'. Na chu kohlaaj ruye'jiik i 33 suut chi riij i q'iij, jarob' haab' chik xooj aloq?

Pajoj iib'.

Chatz'ihb'aaj kib'ihnaal i aha' reh i k'ihalb'isanik.

Chih kamaj noq x'uksjik cho wach i k'ih'alb'isanik.

Ha'nwach chik taqe xikamanik cho ruuk' i k'ihalb'isanik eh chih jarik xkikoj cho reh rutub'u'jiik kiib'.

Ne' na rub'an chi ne' nub'an i k'ihalb'isanik kuuk' taqe ehtaal ajlanb'al pan Maaya, chi ma' ne' tah nutob'eej wiib' ruuk' i kajtz'u'k.

Chach'ob' wach, nik' wach inb'anarik i k'ihalb'isanik kuuk' taqe ehtaal ajlanb'al pan Maaya.

Ruwahxaq Ch'uq
Re' rub'anariik ipuhkanik pan ajlanb'al maaya eh araaw

Re' ajwaal wach chi na rutijiljiik:

Rukojariik chi korik i rub'ehel i puhkanik pan ajlanb'al Maaya eh Araaw.

Elik chi k'axkiil pan qak'achariik ruuk' rukojariik chi korik i rub'ehil i puhkanik pan ajlanb'al Maaya eh Araaw.

Tik'aab' reh.

Inq'orarik cho najtir q'iij chi re' taqe Aj "Babilonia" eh "hindúes" re' taqe peet xi'ehtelenik wach i puhkanik. Re' rub'ehil i puhkanik inb'ehsjik wach yu'nah, re' taqe aj "hindú" xi'uksanik cho wach, maj wach naah i kimeexa saniib' wach, inkikoj cho i re' i nik' nimaal na rupuhkjiik, ruch'iil i ch'aqool reh, re' ineel eh jarob' inqohxinik.

"Noq xi'ik'ik taqe haab' re' i na'ojb'al wilih xk'amarik jeh "Europa" kuum taqe Araaw. "Leonardo de Pisa" xuyeew chi kiwach chu paam i haab' 1,202. Chu wach i haab' 1,647, xub'ehsaj chi reh rehtaal i puhkanik kojoroq i ehtaal wili" 2 (p 103).

Re' i puhkanik inkik'u'lb'ilej kiib' i kib'ehel ruuk' reh i k'ihalb'isanik, eh ko ruman reh b'anoj riij i pa' jarik inqab'ehsaj wach pan qak'achariik.

Re' puhkanik inkamanik qeh eht'alb'al reh jarub' pech inook jenaj k'ihaal chu paam jino'q chik pa reh laj k'ihaal oon reh riljiik jarub' pech ne' rub'an chi ne' inqach'aq jino'q ehtaal ajlanik.

Re' rub'anariik i puhkanik kuuk' taqe ajlanb'al araaw.

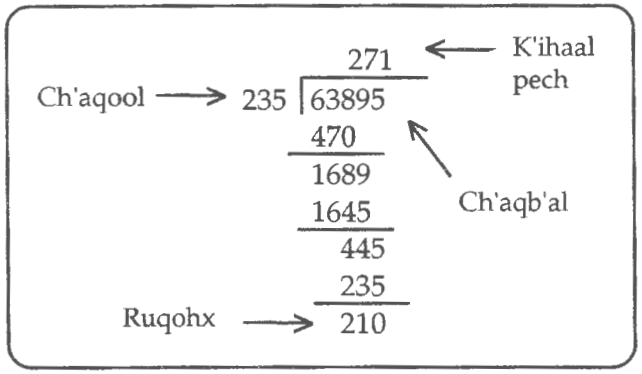
Ko ruman chi na qeht'aliim wach i ehtaal puhkanik reh reht'aljiik chih jarik na qab'anam, je' wo' ajwaal wach chi na ruwih'iik quuk' kiib' wach chi k'ihaal, re' i na ruch'aqjiik ruch'iil i ch'aqool, na qab'an i puhkanik kuuk' taqe kab'chel i k'ihaal wilih, ineel i ruk'ihaal pech, eh wilik pech inkahnik i ruqohx.

Re' k'ihaal pech:

Re' q'orik wilih, iraaj ruq'orom, jarub' pech inook i ch'aqool chu paam i ch'aqb'al 2 (p 114).

Re' taqe aha' reh i puhkanik pan araaw.

```
                 271   <-- K'ihaal
                ------   pech
Ch'aqool --> 235 | 63895
                 470
                 ----
                 1689
                 1645   <-- Ch'aqb'al
                 ----
                  445
                  235
                  ----
Ruqohx --->       210
```



Ehtaal 1.

Jenaj kamanoom 98 b'oot chi iq'omb'al wach tz'aq xuk'uhsaj wach reh ru'iq'omjiik wach 500 kajtz'u'k meetr chi tz'aq. Jarub' b'oot na rajwaam reh chi na riq'omeem wach i 7,896 kajtz'u'k meetr chi tz'aq?

```
        15
      ------
500 | 7896
      500
      ----
      2896
      2500
      ----
       396
```

15 X 98 = 1,470.

Ajwaal wach 1,470 b'oot chi iq'omb'al.

Ehtaal 2.

Re' runimaal til nim tinamit wilik pan kiyejaal taqe k'ihaal tinamit wilkeeb' pa rokb'aal teew re' i "Brasil" 8,511,996 kajtz'u'k kilomeetr wilik reh, eh re' i tinamit wili woo ar eh ma nim tah re' i "Surinam" 163,820 kajtz'u'k kilomeetr wilik reh. Jarob' naq chi tinamit "Surinam" ne' inook chu paam i ruye'aab' "Brasil"?

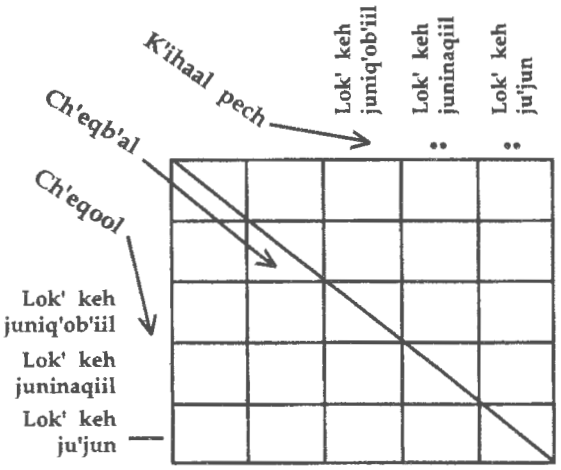
```
          15
        ------
163820 | 8511996
         819100
         ------
          320996
          163820
          ------
          157176
```

Ne' naq inook 15 pech i "Surinam" chu paam i ruye'aab' i "Brasil".

Re' rub'anariik i puhkanik kuuk' taqe ajlanb'al maaya.

Reh rub'anariik i puhkanik kuuk' taqe ajlanb'al pan Maaya, ko ruman chi na qeht'aliim i wilih:

• Jenaj i kajtz'u'k je' rukab' i wilik k'ixkaab'.



•• Re' ch'eqb'al inkojorik chu paam i k'isa kajtz'uk' aha' iniik' wii' i q'e'lik juuch', eh re' ch'eqool pa rutz'eet i kajtz'u'k k'ixkaab', re' k'ihaal pech pa rusak'aaj kajtz'u'k wach naah.

••• Inch'ob'arik kiwach taqe ajlanb'al mi ma' ruyew riib' kuuk' taqe ehtaal wilkeeb'.

•••• Kikorb'eesjik taqe tz'uhr chi juuch', re' juuch' kikorsjik chi tz'uhr, aha' ko ruman ruch'aqeriik kiwach taqe ju'junaal, taqe juninaqiil, taqe juniq'ob'iil.

— Keht'aliij chi ma' chi juneliik tah manlik wach inelik, wilik pech inqohxanik.

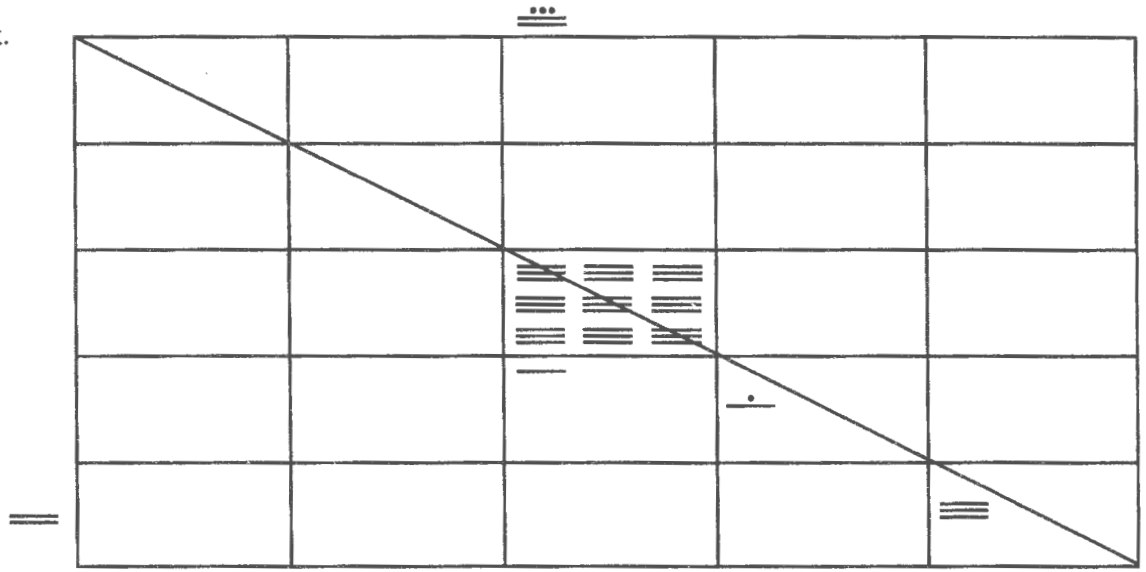
—• Re' rub'anariik reh, na qatik'aam cho wach naah i nim iruq'or, ku rehtaal na qaponiik ruuk' i lok' reh i ju'jun.

Ehtaal 1.

Mi re' Mar wilik reh 135 chi t'uus eh iraaj rupuhkaam wach kinaah 10 chi k'achareel. Chih jarik na rub'anam reh chi jenaj wach na kojiik aloq chi kunchilaal?

Reh reht'aljiik jarob' na ruye'jiik keh i kiju'junaal, na rub'anariik juno'q puhkanik. Mi je'?

Qil mi korik.



13 i kit'uus ne' inooj aloq chi kiju'junaal.

Je' wilih xb'anaar reh i puhkanik wilih:

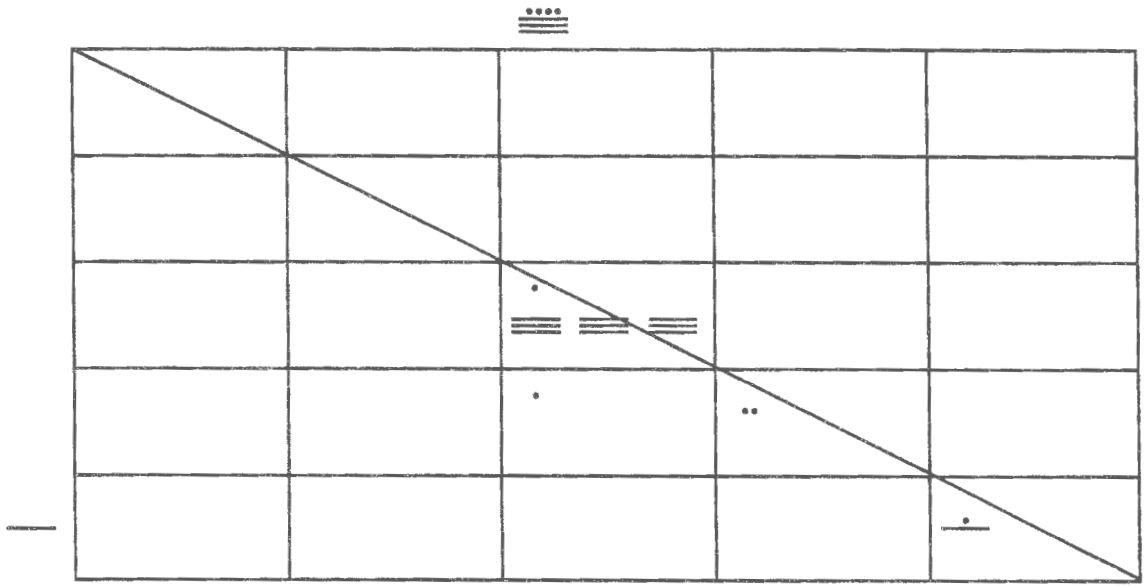
- Noq jenaj ehtaal reh i ch'eqb'al k'isiin naah chu wach juno'q ehtaal reh i ch'eqool, inch'ob'orik wach reh chi na ruqajiik cho chu paam i lok' wilik chi ri'sil.

- Noq ch'ob'ooj chik wach, inch'eqarik reh chi ineel i k'ihaal pech eh intz'ihb'jik pa rusak'aaj taxaaj i kajtz'u'k.

••• Mi xqohxonik intz'ihb'jik chi ri'sil i kajtz'u'j wilik wii' i ch'eqb'al.

Ehtaal 2.

Jenaj qatu' ixoq 46 liiwr i kinaq' wilik ruuk'eh iraaj rupuhkaam wach kinaah taqe 5 chi rak'uun. Jarub' liiwr na ruye'em reh i ju'jun chi rak'uun?



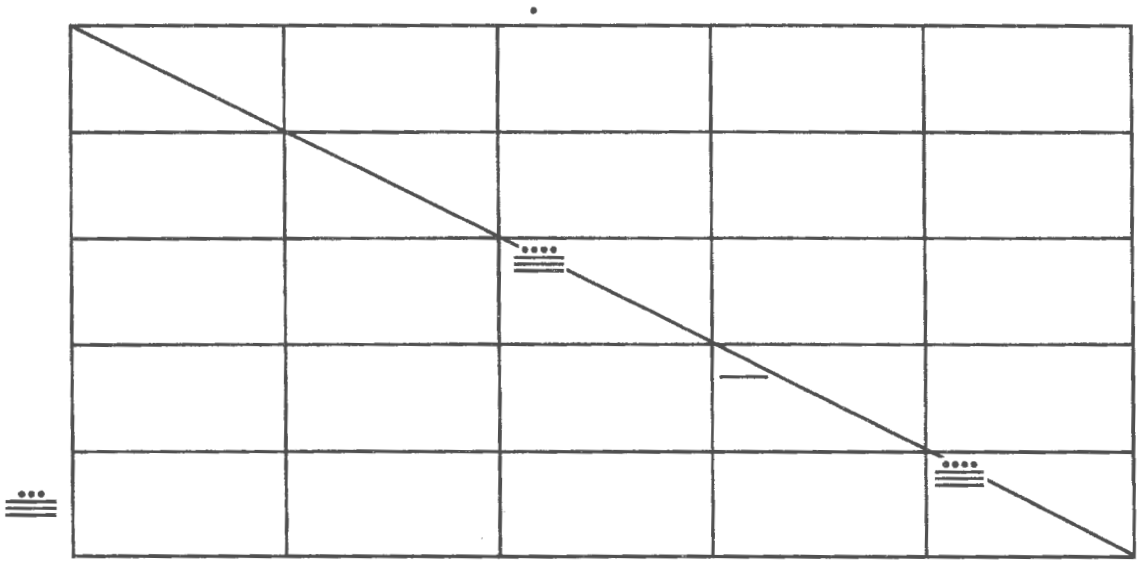
10 liiwr i kinaq' keh i ju'jun chi ak'unb'ees.

Chu paam i kajtz'u'k wilih jenaj wach xb'anarik ruuk' i ehtaal. maj jenaj xqohxanik eh xtz'ihb'jik chi ri'sil i ch'eqb'al.

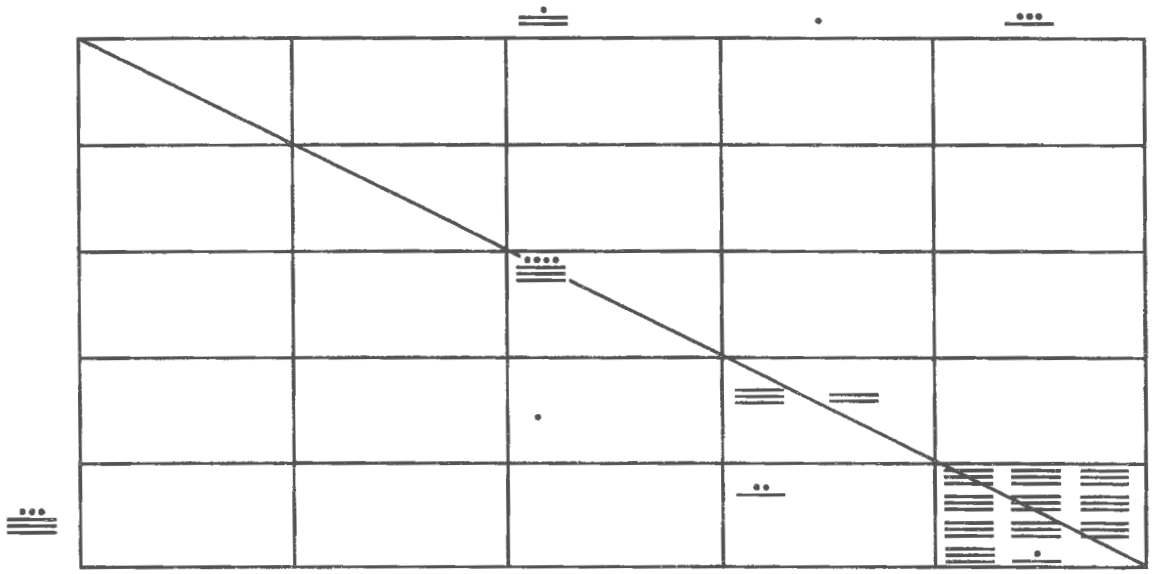
Ehtaal 3.

Jenaj ehchan nim laj ak'al 7,719 k'ahaam i rak'aal eh iraaj ruk'ayem keh taqe 18 chi rukamanoom, re' reh iraaj reht'aliim jarob' k'ahaam na ruye'em keh chi kiju'junaal. Jarub' k'ahaam na ruye'em keh chi kiju'junaal?

Re' inb'anaar chi peet.



Re' inb'anaar chik chi riij i peet.



Ne' inooj aloq chi 428 K'ahaam keh i kamanoom chi kiju'junaal.

Je' wilih xb'anaar reh i puhkanik reh i ehtaal 3.

• Xtik'i'jik wach naah i lok' keh taqe juniq'ob'iil eh xqohxonik jenaj.

•• Re' i qohx jenaj, xq'ahsjik cho chu paam i lok' keh i juninaqiil eh xch'aqarik wach chi juninaqtaq xb'anarik i puhkanik eh xqohxonik wuquub'.

••• Re' i qohx wuquub' xkorsjik chi ju'jun eh xb'anarik i puhkanik, xqohxonik wahxaqiib'.

Re' xq'orjik.

Re' i puhkanik xkikamaneej cho wach taqe aj "Babilonia" taqe aj "hindúes". Kuuk' taqe "hindúes" xwuktik cho wach i rub'ehil ink'amarik yu'nah, re' taqe aj araaw xik'amarik jeh reh i na'ojb'al wilih keh taqe aj "Europa". Re' rehtaal i puhkanik xye'erik ru'uum i "Oughtred".

Re' i puhkanik xwuktik cho wach reh eht'alb'al reh jarub' pech inokik jenaj k'ihaal chu paam chik juno'q k'ihaal nim wach naah i peet oon reh reht'aljiik reh nik' je' noq ch'eqjoq wach jino'q ak'al, wach taq chee' oon xapa' chik jarik.

Kuuk' taqe ehtaal ajlanik pan Maaya irub'an wo' chi ne inqab'an i puhkanik xare' la' pa reh ruk'amariik irub'ehil inb'anarik.

Noq ko ruman chi qeh ne' rub'an chi ne' inqach'ob' wach i ehtaal ajlanik reh chi ma' k'axik tah na eloq chi qawach.

Kamanik

1. Juntuhb' chi 206 kamanoom xikamanik junsol chi riij i ruteheriiik i b'eeh, eh reh kiwa' yejaal q'iij xk'amarik je keh jenaj chakach i wi'k, 2,189 chi wi'k wilik chu paam. Jarub' chi wi'k na kehtriik i ju'jun chi kamanoom?

2. 5 taqe chi wakax inkiyew 65 b'oteey riis kich'uuch' rajlaal. Jarub' naq b'oteey ne' inkiyew chu wach i 8 q'iij?

3. Jenaj i winaq xuloq jenaj i paat 1,600 xoht naah eh iraaj naq rupuhkaam taqe i xoht wach kinaah taqe i 5 chi rak'uun. Jarub' na ruye'em keh chi kiju'junaal?

4. Jenaj ajtik xrisaj 890 kintaal chi raa' kaxlan iis eh xoojruk'ayej cho, noq xponik 13 taqe ajloq'ool wilkeeb' ar chalik xukapaaj riij chi jenaj wach k'ihaal na ruk'ayem keh. Jarub' kintaal chi raa' kaxlan iis na ruk'ayem keh chi kkiju'junaal ajloq'?

5. Jenaj winaq iraaj ruyejaa'm jenaj rupaat, eh xub'an riij chi 2,500 xaan na rukojom, chalik xusik' 5 rukamanoom reh rutiq'i'jiik taqe xaan. Jarub' chi xaan na kiyejaa'm i ju'jun chi kamanoom?

Kamanik

1. Yu'nah chi xawil chik kiwach taqe ehtaal reh rub'anariik i puhkanik ruuk' taqe ehtaal ajlanb'al pan Maaya, chab'an taqe i wilih inkojarik chi ri'sil i tz'ihb' wilih:

1. Jenaj wilik reh 17 kajtz'u'k meetr, rak'aal eh xukapaaj rukojoriik pan koraal ruuk' junrahp 838 kajtz'u'k meetr rooq i ch'ihch' k'ahaam k'iix riij. Jarub' sut ne' rub'an i ch'ihch k'ahaam chi riij i rak'aal.

2. Jenaj ajamaneel chi riij i ka'sor ch'ihch' inb'ehik 10 kilomeetr ruuk' 15 chi jumehq'. Jarub' kilomeetr rub'ehim chik wach ruuk' i 145,168 jumehq'?

3. Jenaj i ruqerem riib' ch'ihch, wilik reh 30 nimaq taq ye'aab', eh 7 taqe chi nimaq taq ye'aab nujunaq chik taqe, eh inkaaj kijohsam 3,556 chi k'achareel chu paam. Jarub' na ki'okiik chu paam taqe nimaq taq ye'aab'?

Pajoj iib'.

Chatz'ihb'aaj nik' wach noq xwuktik cho wach i puhkanik.

Chih inkamanik wii' qeh i puhkanik?

Chatz'ihb'aaj i kib'ihaal taqe aha' reh i puhkanik.

Ajwach ye'wik rehtaal i puhkanik?

Chatz'ihb'aaj nik' wach inb'anarik i puhkanik kuuk' taqe ehtaal ajlanb'al pan Maaya.

Ne' ta naq inkiyew aweh taqe ehtaliil ajlanb'al pan Maaya reh puhkanik, aha' naq ne' natik'aa' wii' reh rub'anariik i puhkanik ku rehtaal na kohlaaj wach.

Rub'eleej Ch'uq
Re' rub'ehsjiik kiwach taqe pajb'al

Re' ajwaal wach chi na rutijiljiik:

Reht'aljiik kiwach taqe nik' k'ihaal pajb'al wilkeeb'.

Reht'aljiik eh kikojariik chi korik taqe pajb'al wilkeeb' reh elik ruuk' i k'axkiil inqak'ul pan qak'achariik.

Tik'aab' reh.

Maj qeht'aliim chik chi re' i winaq ku pa rumiiqrik cho i k'acharik xutik'a' yejanik kib'ehil taqe pajb'al, tob'b'al riib' chi rupajariik nik' nimaal iril wach pa ruk'achariik. Chi'nchel taqe ruye'jeniik xwuktik cho wach maj ajwaal wach reh ruk'amariik chi korik i ruk'achariik.

Ruum i re', re' winaq xruksaj cho wach k'ih taqe chi pajb'al, pajb'al keh taqe nik' nimaal insutunik reh, pajb'al nik' nimaal irukoj pa rukamaj, pajb'al reh nik' nimaal inye'arik reh ruum i loq'laj qatuut ak'al.

Je' re' noq ki'ooj aloq pan keh taqe pajb'al chi je' wilih:

Pajb'al ahliil.

Ruuk' i pajb'al ahliil inqapaj ki'ahliil taqe chih jarik inkamanik reh pa ruk'ayb'aal i k'achareel, je' rukab' taqe i t'ohr reh qak'uxb'aal, pajb'al kiwa' taqe chikop eh wilik chik ruman.

Re' i k'achareel xruk'saj cho kiwach taqe pajb'al, eh je' rukab' noq xb'ehik cho wach i k'acharik re' taqe pajb'al xoojaloq chi reh reh chik kiwach eh yu'nah ne' chin inqaraq taqe:

- • Pajb'al pan taq k'aay.
- •• Pajb'al keh taqe iq'oom.
- ••• Pajb'al keh taqe holohik kiwach ab'aj.

Pajb'al pan taq k'aay.

Toneel. Jenan toneel, juninaq kintaal wilik chu paam, 80 aroow, 2,000 liiwr, 32,000 oons, 521,000 "adaarm", 1,536,000 tomiin, 18,432,000 kraan.

Kintaal. Wilik reh 4 aroow, 1000 liiwr, 1,600 oons, 25,600 "adaarm" 76,800 tomiin eh 921,600 kraan.

Re' aroow. Wilik reh 25 liiwr, 400 oons, 6,400 "adaarm", 19,200 tomiin eh 230,400 kraan.

Liiwr. Jenaj liiwr wilik reh 16 oons, 256 "adaarm", 768 tomiin oon 9,216 kraan.

Oons. Jenaj pajb'al inkojarik, eh wilik reh 16 "adaarm", 48 tomiin, 576 kraan.

Adaarn. Jenaj adaarm, jenaj wach ruuk' i 3 tomiin oon 36 kraan.

Tomiin. Jenaj tomiin wilik reh 12 kraan.

Kraan. Jenaj kraan eliik wach ruuk' 0.049 kraan.

Pajb'al, kikojorik keh taqe iq'oom kuuk' taqe k'ayen iq'oom.

Liiwr. 12 oons, 345.7 kraam.

Oons. Jenaj oons, wilik reh 8 traakm.

Traakm. Jenaj traakm, wilik reh 3 eskruup.

Eskruup. Jenaj eskruup, wilik reh 24 kraan.

Pajb'al inkojorik reh paajb'al keh taqe holwachiil ab'aj.

Liiwr. Wilek reh 2 maark.

Maark. Jenaj maark, eliik wach ruuk' i 8 oons.

Oons. Jenaj oons, eliik wach ruuk' wahxaqiib' oxq'at.

Oxq'at. Eliik wach ruuk' i 6 tomiin.

Tomiin. Jenaj tomiin, eliik wach ruuk' i 3 kilaat.

Kilaat. Jenaj kilaat, eliik wach ruuk' i 4 kraan.

Q'orik pajb'al keh taqe haab', q'iij.

Najtir cho q'iij, inxtihk'ik i q'orik chi kiij taqe pajb'al q'iij, reh ruq'orjiik kib'irel taqe q'iij ik'inaq chik taqe eh reh ruye'jiik kib'irel taqe q'iij chi qawach. Re' iraaj ruq'orom chi najtir q'iij xikapeb'inik cho chi kiij taqe q'iij ik'inak chik cho taqe, chi kiij taqe q'iij k'ahchi'qik'iik wii' eh chi kiij i q'iiij na qik'iik wii'.

Lajeeb' ho'k'ahliil haab'. Jenaj ho'k'ahliil haab', wilik reh 10 ho'k'ahl haab', oon 100 lajhaab', oon 200 ho'haab', 1,000 haab', oon 12,000 poh eh k'isiin ma' 365,00 q'iij, 8,760,000

junk'aam, 525,600,000 jumehq', 31,536,000,000 k'isa jumehq'.

Ho'k'ahlhaab'. Jenaj ho'k'ahlhaab', wilik reh 100 haab', 10 lajhaab', 20 ho'haab', 100 haab', 1,200 poh, 36,500 q'iij, 876,000 junk'aam, 52,560,000 jumehq', 3,153,600,000 k'isa jumehq'.

Lajhaab'. Jenaj lajhaab', wilik reh 10 haab', 2 ho'haab', 120 poh, 3,650 q'iij, 87,600 junk'aam, 5,256,000 jumehq', 315,160,000 k'isa jumehq'.

Ho'haab'. Jenaj ho'haab', wilik reh 5 haab', 60 poh, 1,825 q'iij, 109,500 jumehq', 6,570,00 k'isa jumehq'.

Haab'. Jenaj haab' wilik reh 365 q'iij, 8 junk'aam, maj ma' xelik chi xkich'aq taj i 8 junk'aam pan kixelek taqe 365 q'iij, xkojarik jenaj chik q'iij wach kinaah taqe i keh i haab' chi kajkaj haab' xilak, maj mi xqak'ihalb'isaj kajpech i 8, inooj eloq 24, eh je' re' k'ihaal re' wilik reh i jenaj q'iij. Re' wilih iraaj ruq'orom qeh chi re' taqe haab' kichaal chi kajkaj xelek 366 q'iij wilik keh, maj inkojorik chi ruman irukab' poh reh i haab', re' poh peb'reer inkiq'or reh.

Poh. Jenaj poh reh reh wach i k'ihaal i kiq'ijil, re' poh peb'reer 28 q'iij wilik reh eh chi kajkaj haab' xilek 29 inwihik reh; ab'ril, juuni, septieemr eh nob'eemr 30 q'iij inwihik keh chi kiju'junaal, eh re' taqe poh eneer, maars, maay, juul, akoost, oktuub'r eh desemb'r, 31 q'iij inwihik keh.

En.	Peb'.	Mar.	Ab'r.	Maay.	Juuni.	Haab'.
31	28	31	30	31	30	Manlik waach haab'
31	29	31	30	31	30	Manlik waach haab'

Juul.	Akoo.	Sep.	Oktuu.	Nob'.	Des.	Haab'.
31	31	30	31	30	31	Manlik waach haab'
31	31	30	31	30	31	Manlik waach haab'

Xamaan. Jenaj xamaan wilik reh 7 q'iij, 168 junk'aam, 10,080 jumehq', eh 604,800 k'isa jumehq'.

Q'iij. Jenaj q'iij wilik reh 24 junk'aam, 1,440 jumehq', 86,400 k'isa jumehq'.

Junk'aam. Jenaj junk'aam wilik reh 60 jumehq', 3,600 k'isa jumehq'.

Jumehq'. Jenaj jumehq' wilik reh 60 k'isa jumehq'.

K'isa jumehq'. Noq kojq'orik wach naah i k'isa jumehq', k'ahchi' qaq'oriik wach naah jenaj chi 60 q'at chi jumehq'.

Pajb'al keh taqe ha'.

Re' taqe pajb'al ha', najtir wo' intz'uhkrik chaloq kuum taqe najtir k'achareel, maj reh reh wach kikojom cho reh pajb'al pa' jarik keh ha' wach.

Pajb'al k'amooj cho naah ruuk' lajeeb' rub'ehil i pajb'al ooq.

Mirialiitr. Wilik reh 10,000 liitr, je' nah 10 kiloliitr, 100 ektoliitr, 1,000 teekaliitr.

Kiloliitr. Eliik wach inooj aloq ruuk' 1,000 liitr, je' nah 10 ektoliitr, 100 tekaliitr.

Ektoliitr. Re' pajb'al wilih wilik reh 100 liitr, 10 tekaliitr.

Tekaliitr. Re' pajb'al wilih, wilik reh 10 liitr eh je' nah 10 tesiimtr roxtz'u'k.

Liitr. Jenaj liitr wilik reh 1 tesiimtr roxtz'u'k

Ruman kiwach taqe pajb'al.

Karapoon. Jenaj karapoon wilik reh 5 kaloon, oon 25 b'oteey.

Kaloon. Jenaj kaloon eliik wach ruuk' i 5 b'oteey oon 15 kulk ma'xta xikin, oon 3 liitr oon 375 ho'k'ahl-liitr.

B'oteey. Jenaj b'oteey inooj aloq 3 kuk ma'xta xikin oon 75 ho'k'ahl-liitr.

Kulk ma'xta xikin. Re' pajb'al wilih, wilik reh 25 ho'k'ahl-liitr

Pajb'al nimaal ooq.

Re' taqe k'achareel, chu paam i kik'achariik kiib' wach i pajb'al nik' nimaal wilik chi kisut inkikoj:

- Pajb'al k'amooj cho naah ruuk' lajeeb' rub'ehil i pajb'al ooq.

- Kipajb'aal ajnajtirr q'iij.

- Pajb'al k'amooj cho naah ruuk' lajeeb' rub'ehil i pajb'al ooq.

Re' pajb'aal wilih inkikoj taqe i kikamanik kuuk' taqe k'ayen ch'ihch reh johsb'al paat, inkikoj taqe johsaneel paat eh inkikoj taqe ajk'aay inkipaj nimaal rooq pa' jariik inkik'ayej.

Miriameetr. Jenaj miriameetr eliik wach ruuk' i 10,000 meetr, je' nah 10 kilomeetr, oon 100 hectomeetr, oon 1,000 tekameetr.

Kilomeetr. Re' pajb'al wilih 1,000 meetr wilik reh, oon 10 ektomeetr, oon 100 tekameetr.

Ektomeetr. Re' pajb'al wilih, wilik reh 100 meetr, je' nah 10 tecameetr.

Tekameetr. Re' pajb'al wilih jenaj wach ruuk' i 10 meetr, je' nah 1,000 sentimeetr oon 100 desimeetr oon 10,000 milimeetr.

Meetr. Re' pajb'al wilih wilik reh 10 tesimeetr, je' nah 100 sentimeetr oon 10,000 milimeetr, je' nah 39 Pulkaa eh 3 ruwahxaaq ch'aq.

Desimeetr. Re' Wilih, jenaj wach ruuk' i jenaj ch'eq reh i rulaaj ch'aq meetr oon 10 sentimeetr.

Sentimeetr. Re' pajb'al wilih, wilik reh 10 milimeetr oon jenaj 100 ch'aq reh i rulaaj ch'aq meetr.

Milimeetr. Re' pajb'al wilih jenaj 1,000 ch'aq, reh i jenaj meetr.

Najtir taq pajb'al.

Yaar. Jenaj yaar 91 sentimeetr ruuk' 4 milimeetr wilik reh, je' nah 36 pulkaa oon 3 ooq.

B'aar. Jenaj b'aar wilik reh 83 sentimeetr ruuk' 6 milimeetr, je' nah 33 pulkaa.

Ooq. Wilik reh 12 pulkaa, je' nah 30 sentimeetr ruuk' milimeetr.

Pulkaa. Re' pajb'al wilih, wilik reh 2 sentimeetr ruuk' 5 milimeetr.

Re' xq'orjik.

Maj qeht'aliim chik chi re' i winaq pa rumiiqriik cho i k'acharik xutik'aa' yejanik kib'ehil taqe pajb'al, tob'al riib' chi rupajariik nik' nimaal iril wach chi rusut pa ruk'achariik. Chu'nchel taqe ruyejeb'jiik xwuktik cho kiwach re' taqe i wilih:

- Re' Pajb'al Ahliil.
- •• Re' Pajb'al keh i Q'iij.
- ••• Re' Pajb'al keh i Ha'.
- •••• Re' Pajb'al Nimaal Ooq.

Re' taqe reh reh kiwach laj pajb'al wilih, inkamanik keh taqe k'achareel pajb'al nik' nimaal inkib'ehsaj wach pan kik'achariik. Re' taqe pajb'al wilih oxch'uq kiwach, re' taqe i wilih:

- Pajb'al kikojarik pan taq k'aay.

•• Pajb'al, kikojarik keh taqe iq'oom kuuk' taqe k'ayen iq'oom.

••• Pajb'al inkojarik reh pajb'al keh taqe holwachiil ab'aj.

Najtir cho q'iij, noq xtihk'ik i q'orik chi kiij taqe pajb'al q'iij, reh ruq'orjiik kib'iral taqe q'iij ik'iinaq chik taqe eh reh ruyejeb'jiik kib'iral taqe q'iij chi qawach. Re' iraaj ruq'orom chi najtir q'iij xikapeb'inik cho chi kiij taqe q'iij ik'inak chik cho, chi kiij taqe q'iij k'ahchi' qik'iik wii' eh chi kiij i q'iiij na qik'iik wii'.

Jenaj wo' chik pajb'al xwuktik cho wach re' pajb'al inkojarik keh taqe ha', maj ruum chi ko ruman wo' reht'eljiik k'ihaal i ha'.

Je' wo' re' taqe k'achareel, chu paam i kik'achariik kiib' wach i pajb'al nik' nimaal wilik chi kisut inkikoj:

- Pajb'al k'amooj cho naah ruuk' lajeeb' rub'ehil i pajb'al ooq: Re' pajb'al wilih, re' meetr iruk'am naah.

- Kipajb'aal ajnajtir q'iij: Re' pajb'al wilih re' b'aar, re' yaar eh ooq, iruk'am reh.

Pajoj iib'.

Chatz'ihb'aaj kib'ihnaal taqe reh reh kiwach pajb'al.

Chih reet eh chih kamaj noq x'uksjik cho kiwach taqe pajb'al?

Chatz'ihb'aaj kib'ihnaal taqe pajb'al ahliil.

Chatz'ihb'aaj kib'ihnaal taqe pajb'al nimaal ooq.

Chatz'ihb'aaj kib'inaal 10 q'orik inkamanik chi pajb'al q'iij oon haab'.

Chatz'ihb'aaj kib'ihnaal taqe pajb'al inkamanik keh taqe ha'.

Rulaaj Ch'uq
Re' taqe reh reh kiwach pajb'al inkamanik chi qawach i hoj maaya

Re' ajwaal wach chi na rutijiljiik:

Reht'aljiik kiwach taqe nik' k'ihaal pajb'al wilkeeb' ruuk' i ruwii' qak'achariik hoj Maaya.

Reht'aljiik eh rukojariik chi korik taqe pajb'al wilkeeb' chu paam i ruwii' qak'achariik hoj Maaya.

Reht'aljik aha' kikojarik taqe pajb'al wilkeeb' chu paam i ruwii' qak'achriik hoj Maaya.

Tik'aab' reh.

Je' rukab' i xqaq'or cho chu paam taqe ch'uq ik'inaq chik cho, re' taqe qamaam qati't Maaya xkeht'aliij paam chi korik i ilooj taq ajlanb'al, re' ilooj keh taqe ch'umiil eh wilik chik ruman. Je' wo' xkuksaj cho wach i kipajb'aal, pajb'al reh nik' nimaal wih'ik chi kisut xye'arik keh ruum qatuut ak'al. Re' taqe pajb'al xkuksaj cho wach re' taqe wilih:

- Pajb'al keh taqe q'iij.
- Pajb'al Nimaal Ooq.
- Pajb'al K'ihaal.

Pajb'al q'iij.

Junk'aam chik. Re' wilih k'ahchi' ruq'oriik wach naah chi ma' najt ta ik'inaq cho.

Pan junk'aam. Re' wilih k'ahchi' ruq'oriik wach naah i junk'aam ma' najt taj eh majaa' ta inik'ik .

Eew. Re' wilih inq'orik wach naah i jenaj q'iij ik'inaq chik .

Kib'ijer. Noq inqaq'or kib'ijer, k'ahchi'qaq'oriik wach kinaah i ki'ib' q'iij ik'inaq chik cho.

Yu'nah. K'ahchi'qaq'oriik wach naah i q'iij wilkooj wii'.

Iqal. Noq inqaq'or iqal, k'ahchi'qaq'oriik wach naah jenaj q'iij inchaal chi qawach.

Kab'iij. Re' iraaj ruq'orom qeh ku pa rukab' q'iij chi qawach rejeh.

Q'iij. Re' wili kejeb' wach noq inooj eloq, re' taqe i wilih:

Saq'ik, tuqaab' i q'iij, xq'eq eh aq'ab'. Re' wilih ma' insahchik ta wach, xanb'ehsjik wo' wach chu paam i chi'chel i k'acharik, je' pan taq loq'o'nik, je' pan taq nimq'iij kuuk' i tinamit.

Winaq. Re' wilih iraaj ruq'orom qeh juninaq q'iij, eh inooj aloq chi jenaj poh k'amb'al keh i q'iij inkojarik
reh i tik.

Tun. Jenaj wo' haab', wilik reh 360 q'iij, jenaj wach ruuk' i 18 poh chi winaq q'iij.

K'atun. Junmohl chi 7,200 q'iij eh jenaj wach ruuk' i 20 tun oon 360 winaq.

B'aqtun. Jenaj wo' chik mohl chi 144,000 q'iij eh eliik wach ruuk' i 20 k'atun, 400 tun eh 7,200 winaq.

Piktun. Jenaj mohl chi 2,800 q'iij, eh jenaj wach kuuk' i 20 b'aqtun, 400 k'atun, 8,00 tun oon 144,00 winaq.

Kalab'tun. Junmohl chi 57,600 q'iij, eh jenaj wach ruuk' i 20 piktun, 400 b'aqtun, 8,000 k'atun, 3,200,000 tun,
oon 57,600,00 winaq.

Kinchiltun. Re' wilih, wilik reh 1,152,000 q'iij, eliik wach ruuk' i 20 kalab'tun, 400 piktun, 160,000,000 tun,
2,880,000 winaq.

Alawtun. Jenaj alawtun wilik reh 23,040,000 q'iij re' jenaj wach ruuk' i 20 kinchiltun, oon 400 kalab'tun, 8,00 piktun, 160,00 katun, 3,200,000 tun, 57,600,000 winaq.

Pajb'al nimaal ooq.

Ch'ol k'itub'. Re' wili nik' nimaal inkahnik pan kiyejaal taqe ju' nah qaq'ab ruuk' i rukab' nah qaq'ab' noq inqateh kixilak.

Ka' q'ab'. Re' wilih re' i runimaal wach i ki'ib' nah qaq'ab' noq inqajunehteej kiwach, xti q'eq' kamaneel keh taqe ajkeem.

Kajq'ab'. Re' wilih re' i runimaal wach i kejeb' nah qaq'ab' noq inqajunehteej kiwach, je' wo' inkamanik chi kiwach taqe ajkeem.

K'itub'. Re' pajb'al wilih, re' runimaal inkahnik noq inqayub' wach taqe i peet ruch'iil i xam nah qaq'ab', eh inkamanik reh pajb'al nimaal rooq pa' jarik qeh.

Jenaj tileb'. Inkamanik reh pajb'al rooq chih pa' jarik qeh, re' nimaal wilih ineel cho ruuk' i qatz'uhk ku inponik ju' qaq'ab'.

Junjaah. Re' wilih inqakoj wo' chi pajb'al chih pa' jarik qeh, eh re' i runimaal re' ineel noq inqateh wach taqe qatileb' eh ineel cho ju' qaq'ab' jenaj ku inponik ruuk' i ju' qaq'ab' jenaj.

Juntoq jaah. Re' pajb'al ineel cho noq inqateh jeh wach jenaj qatileb' eh xa ruuk' qalaq inponik.

Rutuus. Re' wilih inkojarik chu paam taqe kamanik reh i keem ruuk' i po't, je' wo' taqe i ajtik noq inkikamaneej wach ak'al, eh inkiq'or wo' taqe ajtijineel noq inkil paam i kihuuj. Je' wo' inq'orjik noq intiq'ijik wach jino'q molooj iib' oon nimq'iij.

Pajb'al k'ihaal.

Koht/kuht. Re' pajb'al wilih inkojarik keh taqe rum, tilul, oon xa chih pa' chik jarik wach chee' iruyew riib' chi kohtaal.

Tz'uhb'/tz'uut. Re' wilih inkojarik chi pajb'al reh riq'omel taqe k'uxbal, wi'k oon xa chih pa' chik jarik pooq inpajarik.

Mohq'. Re' k'ihaal wilih, re' iruq'or qeh nik' nimaal iruchop i qaq'ab' noq inqamohq'eej rut'ohriil i xa chih pa jariik.

Mohl. Re' pajb'al wilih inkojarik reh k'ayb'al oon loq'b'al kaxlan iis, silip, iik eh wilik chik ruman.

Mohch'. Re' wilih inkojarik chi pajb'al keh taqe qak'uxb'aal wilik kit'ohriil oon xa chih pa' chik jariik chi ija'.

Q'ahl oon b'ohl. Re' wilih inkamanik qeh chi pajb'al siq, ruwa' wakax, sii', xaq iwan oon chih chik.

Yuhy. Re' pajb'al wilih inkamanik qeh k'ayb'al oon loq'b'al ichaaj, uhtz'ub', chaj eh chih chik.

Re' xq'orjik. Re' taqe qamaam qati't Maaya xkeht'aliij nim xkib'ehij cho paam i k'acharik maj xkib'ehsaj wach chi korik taqe pajb'al, ajlanb'al, re' ilooj keh taqe ch'umiil eh wilik chik ruman. Je' wo' xkuksaj cho wach i kipajb'aal, pajb'al reh nik' nimaal wihik chi kisut xye'arik keh ruum qatuut ak'al. Re' taqe pajb'al xki'uksaj cho wach ko ruman chi keh maj xkaaj keht'aliim nimaal chi'nchel inkil.

Pajoj iib'.

Chatz'ihb'aaj kib'ihnaal taqe pajb'al inkib'ehsaj wach taqe qatinamiit Maaya.

Chatz'ihb'aaj kib'ihnaal taqe pajb'al k'ihaal.

Re' rehtaal aha' inab'an wii' ak'achariik chatz'ihb'aaj ixeb' oq ehtaal inkojorik pajb'al keh taqe q'iij.

Chatz'ihb'aaj kib'ihnaal taqe pajb'al nimaal ooq.

Chatz'ihb'aaj 2 kib'ihnaal pajb'al xq'orjik ayu' eh inkojorik chu wach aye'aab'.

Rujunlaaj Ch'uq
Re' b'ihnaal inkiyew taqe ajjuntar palaw keh taqe xachih jariik ru'uum i nik' je' wilkeeb' wii'

Re' ajwaal wach chi na rutijiljiik:

Reht'aljiik nik' wach inq'orjik keh taqe i chih jarik ru'uum i nik' je' wilkeeb' wii'.

Rutijiljiik pan kaxlan q'orik eh pan qaq'orb'al poqom re' taqe b'ihnaal inq'orjik keh taqe i chih jarik ru'uum i nik' je' wilkeeb' wii'.

Reht'aljiik wach chi korik nik' je' ne' rub'an chi ne' ki'ooj wii' taqe i chih jarik.

Tik'aab' reh.

Reh chi re' taqe k'achareel na kiraqam chi riij chi ma' jenaj tah kiwach taqe i chih jarik wilkeeb' nah ak'al chi qasut xkisik' kib'ihnaal pan kiq'orb'al, reh reh xooj aloq wach i kib'ihnaal maj reh reh woo wach i kehtaal, reh reh wach i nik' je' wilkeeb' wii', reh reh wach i kinimaal, eh reh reh wach i kiye'aab'.

Ru'uum i re' yu'nah reh reh i molaaab' kiwach inb'anarik pan keh taqe i ju'jun chi xapa' jarik, re' taqe kikamanik qeh eh kojkitub'eej pan qak'achariik iqal iqal pan qakamaj, pan qatijiniik, pan qaye'aab' aha' inqak'a'saj wii' qawach, pan qapaat, pan b'eeh oon xa'aha' ne' kojooj aloq wii' atoob' tah pan q'iij oon pan chaq'ab', chi winaq chi ixoq, ak'un oon xuq'un xa'aha' ye'aab'.

Yu'nah na rik'iik qilom taqe i reh reh kiwach xapa' jarik eh nik' je' wilkeeb' wii' chi qasut.

Re' q'oreel nik' je' wilkeeb' wii'.

Re' wilih inkiq'or qeh nik' je' wilkeeb' wii' taqe i chih jarik inqil chi qasut.

Pan yoklik. Re' wilih rujunehteej riib' ruuk' i naah ak'al, pan yoklik.

Pan pa'lik. Re' wilih re' ehtaal iruk'am reh i xapa'jarik wilik rahliil inqajik cho taxaaj.

Pan q'e'lik. Re' wilih ma' ruk'am rah rub'ehil i pan pa'lik xa ta re' i reh pan yoklik.

Ruum i nik' wach je' taqe.

Re' wilih iruq'or qeh nik' wach taqe i chih jarik wilkeeb' chi qasut.

Pimiil. Re' wilih iruq'or qeh chi niik' naah irupimiil i xapa' jarik, mi xojq'orik wach naah

juno'q k'achareel ne' inqaq'or chi xiik' naah ruq'ina'iil, mi xojq'orik wach naah i chee' ne' inqaq'or chi piim i rooq. Mi xqak'am naah i wilih chu paam i na'ojb'aliil Maaya, ne' naq inqaq'or piim, ti'oj, tenetik, puk'upik, reh reh wach aha' inq'orjik wii'.

Chiqkaal. Noq inqaq'or chiqkaal, kojq'orik wach kinaah taqe i chih jarik inqil chi wilkeeb' chi qasut eh ma'xtah runimaal kitib'jolal. Mi xqak'am naah i wilih chu paam i na'ojb'aliil Maaya, ne' naq inqaq'or: xab'aaq irub'an, chiqiij, lepik, xahuuj chik eh wilik chik ruman.

Ru'uum i kiye'aab'.

Ma' najt tah. Je' wilih inqaq'or reh i k'achareel oon xapa' jarik ma' najt tah wilik jeh ruuk' i ye'aab' aha' wilkooj wii' i hoj.

Najt. Je' wilih inqeht'aliij nik' najtiil wilik quuk' i chih jarik ru'uum i ruye'aab' oon najtiil ruq'ijil.

Taxaaj. Re' ye'aab' i xapa' jarik wilik najt wach naah ak'al oon wach qanaah i hoj.

K'ixkaab'. Re' i chih jarik wilik k'ixkaab' reh i juno'q chik chih jarik.

Re' qatz'eet. Ruuk' i juntar i wilih, re' k'achareel rutob'eej riib' reh chi ma' ne tah insahchik eh je' woo chu wach i juntar wilih wilik i qaamna. Chu paam i na'ojb'aliil Maaya inye'jik ruwii' chi korik maj re' ink'amaar reh reh tik'i'nb'al juno'q kamanik maj re' iruk'am reh i rusuut i ha' noq injahlik ruye'aab', re' iruk'am reh i suut teew, re' i ruk'am reh i ruk'uyu'jiik ak'al eh wilik chik ruman.

Re' qasak'aaj. Je' woo ruuk' i juntar i wilih, re' k'achareel rutob'eej riib' reh chi ma' ne tah insahchik eh wilik chi juntar reh i ye'aab' i qaamna aha'wilik wii' i qatz'eet.

Relb'aal q'iij. Re' ye'aab' aha' inasjik cho wii' i q'iij pan taq wahq'iq noq inqil wach taqe peet ruch'aab'.

Rokb'aal q'iij. Re' ye'aab' aha' inqajik wii' i q'iij, re' aha' inooq noq inook o chaq'ab'.

Relb'aal teew/rusak'aaj q'iij. Re' ye'aab' aha' koj'ilwik je wii' eh inkahnik pan qasak'aaj i relb'aal q'iij, je' woo ar inwuktik cho wach i teew.

Rokb'aal teew/rutz'eet q'iij. Re' ye'aab' aha' koj'ilwik je wii' eh inkahnik pan qasak'aaj i rokb'aal q'iij, re' ye'aab' wilih k'ulwaach ruuk' i relb'aal teew, je' woo ayu' inooj i teew.

Runimaal.

Nim. Re' i chih jarik nim paam, nim rahliil. Re' i wilik runimaal chi wach taqe i ruch'iil.

Xamanlik. Re' xapa' jarik, ma' nim tah xa ta naq k'isiin, xamanlik runimaal.

K'isiin. Re' i chih jarik k'isiin paam, ma'xta runimaal, re' k'ulwach ruuk' i nim.

Nim rooq. Re' wilih inq'orjik reh i chih jarik iniik' i nimaal naah ruuk' chik jino'q chih jarik.

K'isiin rooq. Je' wilih inq'orjik reh i chih jarik ma' nim tah rooq', xa k'isiin naah chu wach juno'q chik chih jarik iniik' wach naah i runimaal.

Re' xq'orjik.

Noq xtihk'ik cho wach i k'acharik, re' taqe k'achareel reh chi na kiraqam chi riij chi ma' jenaj tah kiwach taqe i chih jarik wilkeeb' nah ak'al chi qasut xkisik' kib'ihnaal pan kiq'orb'al, reh reh wach i kib'ihnaal xooj aloq maj reh reh woo wach i kehtaal, reh reh wach i nik' je' wilkeeb' wii', reh reh wach i kinimaal, eh reh reh wach i kiye'aab'.

Je' wilih i molorik kiwach xb'anarik:

Kojq'orik wach naah i nik' je' wilkeeb' wii', kojq'orik wach naah i runimaal, kojq'orik wach naah i ruka'yb'al eh je' woo kojq'orik wach naah i ye'aab' aha' wilkeeb' wii'.

Pajoj iib'.

Chatz'ihb'aaj kib'ihnaal inye'jik taqe i chih jarik ru'uum i ye'aab' wilkeeb' wii'.

Chatz'ihb'aaj chih jarik i ka'yb'al.

Chatz'ihb'aaj kib'ihnaal taqe i nimaal i nawil kiwach chi asuut.

Chatz'ihb'aaj jino'q ehtaal keh taqe i chih jarik xqil wach chu paam i ch'uq wilih.

Rukab'laaj Ch'uq
Kiwii' taqe ehtaal

Re' ajwaal wach chi na rutijiljiik:

Reht'aljiik chih kiwii' taqe ehtaal.

Reht'aljiik wach eh rukojarik pan keh taqe i kiwii' ehtaal.

Tik'aab' reh.

Je' rukab' noq inqaaj qaraqam qana'ojb'al wach kinaah taqe ajlanb'al, ehtaal ajlanik, pajb'al eh nik' wach noq re' taqe k'achareel xkib'ehsaj cho wach i nik' nimaal wilik yu'nah, je' woo ajwaal wach reht'eljiik nik' wach je' noq kikojorik pan keh taqe i kiwii' ehtaal ru'uum i ye'aab' aha' wilik wii' oon nik' wach i wilik wii'. Re' taqe i kiwii' ehtaal wilih ne' rub'an chi ne' inqamol kiwach chi je' wilih.

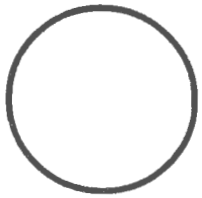
Sirisik/sorosik.
Kajtz'u'k.
Nim rooq kajtz'u'k.
Jutz'ujik kajtz'u'k.
Jiich' kajtz'u'k.
Nim raa' kajtz'u'k.
Ma' jenaj ta wach kajtz'u'k.

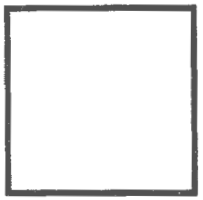
Re' reh reh kiwach oxtz'u'k:

Oxtz'u'k.
Nim ju' oxtz'u'k.
Ma' jenaj ta wach oxtz'u'k.

Oxtz'u'k ma' nim ta inteh.
Pa'lik wach oxtz'u'k.

Sirisik oon sorosik. Je' wilih inq'orji reh jenaj i juuch' iruk'ul riib' i ju', iraaj ruq'orom chi tz'oplik chi junpech, wilik jenaj i yejaal jenaj wach najtiil ruuk' i xa'aha' chi'. Ne' wo' rub'an chi ne inqaq'or chi re' jenaj juuch' kotokik riij 360 kraa wilik reh.

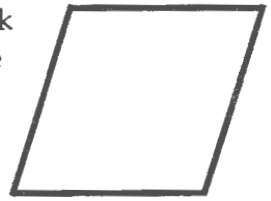




Kajtz'u'k. Re' wilih jenaj ehtaal kejeb' chi juuch' intiq'i'nik reh jenaj wach nimaal kooq taqe juuch'.

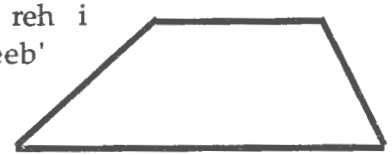
Nim rooq kajtz'u'k. Re' wilih, re' i xapa' jariik oon ehtaal korik wach aha' inkik'ul wii' kiib' i juuch', kiib' i rujojol jenaj wach kinimaal eh kiib' i rujojol ma' jenaj tah wach kinimaal.

Jutz'ujik kajtz'u'k. Kajtz'u'k jenaj wach nimaal taqe juuch' kikorsonik reh, xa re' la wilkeeb' pan juutz'. Kiib' i rutz'u'k aha' inkik'ul wii' kiib' taqe kiib' chi juuch nimaq taqe chi kiwach i kiib' chik kiman.

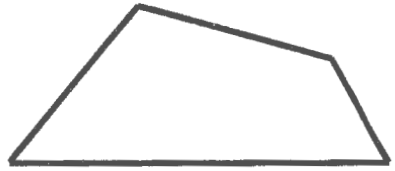


Jiich' kajtz'u'k. Re' wilih kajtz'u'k wo', xa re' la jiik' irub'an, kiib' wo' i rutz'u'k aha' inkik'ul wii' kiib' i juuch' jenaj kiwach eh kiib' ma' jenaj tah kiwach.

Nim raa' kajtz'u'uk. Re' ehtaal wilih kiib' taqe juuch' wilkeeb' korik inkib'an eh kiib' chik i juuch' tz'opb'al reh i kajtz'u'k wilkeeb' pan jiich'.



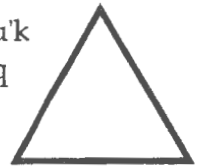
Ma' jenaj ta wach kajtz'u'k. Re' kajtz'u'k wilih, ma' jenaj tah i rutz'u'k eliik tah wach ruuk' taqe i ruch'iil.



Oxtz'u'k.

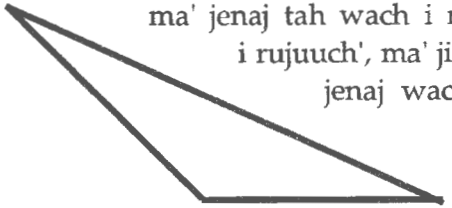
Re' wilih, jenaj ehtaal ma' k'ih tah taqe i rujojol, ixeb' taqe chi juuch inkik'ul kiib' korsb'al reh. K'ih kiwach taqe oxtz'u'k, qil taqe:

Manlik wach oxtz'u'k. Re' oxtz'u'k wilih jenaj wach nimaal rooq taqe rujuuch' je' woo jenaj wach nimaal taqe rutz'u'k.

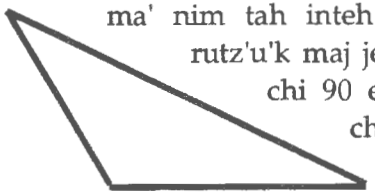


Nim ju' oxtz'u'k. Re' oxtz'u'k wilih kiib' taqe i rujojol jenaj wach kinimaal, je' woo kiib' taqe i rutz'u'k eliik kiwach.

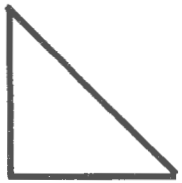
Ma' jenaj ta wach oxtz'u'k. Re' oxtz'u'k wilih, ma' jenaj tah wach i runimaal taqe i rujuuch', ma' jino'q i rutz'u'k jenaj wach.



Oxtz'u'k ma' nim ta inteh. Re' oxtz'u'k wilih ma' nim tah inteh wii' paam taqe i rutz'u'k maj jenaj ma' inqajik tah chi 90 eh ma' injohtik tah chi 180 kraa, eh re' chik taqe kab'chel ma' ki'ik'ik tah chi 90 kraa nimaal kipaam.



Pa'lik wach oxtz'u'k. Re' oxtz'u'k wilih, re' wilik jenaj rutz'u'k pa'lik wach, 90 kraa wilik reh eh re' kiib' chik ruman ma' niik' tah kinaah chi 90 kraa.



Re' xq'orjik.

Re' reht'aljiik kiwach taqe ehtaal wilkeeb' yu'nah xwuktik cho kiwach maj re' taqe k'achareel kisik'im cho riij noq inkil i runimaal, ruwii', ruye'aab'.

Yu'naak kikamaniik qeh reh ruye'jiik rehtaliil taqe i nik' nimaal ajwaal wach chi qawach.

Kamanik

Chab'an taqe i kamanik inye'jik aweh ayu'.

1. Mi re' jenaj kajtz'u'k wilik reh 35 sentimeetr wach jenaj rujojol. Jarob' naq sentimeetr ne' inooj aloq kajchel rujojol?

2. Mi jenaj oxtz'u'k wilik reh jenaj rujojol 81 sentimeetr. Jarob' sentimeetr ne' ki'ooj aloq chi'nchel taqe rujojol?

3. Mi 360 kraa wilik reh jenaj sorosik. Jarob' naq kraa ne' nooj aloq ne' ta inqisaj kejeb', eh chi naq jarik b'ihnaal ne' inye'jik?

4. Jenaj ma' jenaj tah wach kajtz'u'k je' wilih nimaal taqe rujojol 25, 38, 51 eh 73 sentimeetr. Jarob' sentimeetr ne' inooj aloq chi'nchel ne' ta inqamol wach?

5. Chab'an jino'q rehtaliil pa' jarik nakapaaj eh chakoj chi'nchel taqe ehtaal xawil cho wach.

Pajoj iib'.

Chatz'ihb'aaj nik' wach noq inmohlik kiwach taqe kiwii' ehtaal.

Chatz'ihb'aaj kib'ihnaal taqe reh reh kiwach ehtaal.

Chatz'ihb'aaj kib'ihnaal taqe oxtz'u'k x'ilirik wach chu paam i ch'uq wilih.

Chayejaa' kiib' oq ehtaliil oxtz'u'k.

Roxlaaj Ch'uq
Re' taqe q'orik kikojarik reh molaab' chu paam i kina'ojb'alil aj juntar palaw eh chu paam i kina'ojb'alil taqe qaa' qi'sil maaya

Re' ajwaal wach chi na rutijiljiik:

Reht'aljiik taqe reh reh wach q'orik keh i molab'il.

Rukapeb'jiik chi korik wach kinaah taqe rub'anariik i molab' keh taqe i chih jarik.

Tik'aab' reh.

Chu wach i k'acharik, re' taqe k'achareel xkikapaaj cho riij nik' wach taqe q'orik na kikojoriik reh rumoloriik kiwach taqe xachih jarik, je' k'achareel, je' chikop. Re' na'ojb'al wilih xb'ehsjik wach ku'uum taqe k'achareel ajjuntar palaw eh je' woo chi kiwach taqe qaa' qi'sil Maaya.

Noq xkib'an cho i kapeb'inik chi riij, je' wilih i rumoloriik kiwach xkib'an:

Molaab' keh ma'xta paam.
Molaab' keh i jenaj paam.
Molaab' keh i ki'ib' paam.
Molaab' keh i jenaj kiwach (jun-eht).
Molaab' keh i ma' jenaj ta kiwach (ma' jun-eht taj).
Molaab' keh taqe i k'ulwaach.
Molaab' keh i ma' k'ulwaach ta taqe.
Molaab' keh taqe inkiyew kiib' chi ajlanik.
Molaab' keh taqe ma' inkiyew tah kiib' chi ajlanik.
Molaab' keh taqe jenaj wach kiwii'.
Molaab' keh taqe ma' jenaj ta wach kiwii'.

Chu paam i na'ojb'aliil Maaya jenaj mohl oon molaab' inq'orjik keh k'ih chi xa chih pa' rijariik.

Molaab'.

Re' molaab' inq'orjik keh jenaj mohl oon k'ih chi xa chih pa' jariik kiwih'ik chu paam jenaj ye'aab'.

Re' ruye'ariik kehtaliil taqe molaab'.

Ixib' wach ne' rub'an chi ne' inqayeew kehtaliil taqe molaab':

- Molaab' ye'ooj kib'irel.
- Molaab' tz'ihb'amaj kib'iral.
- Molaab' ye'ooj kehtaliil.

Molaab' ye'ooj kib'irel.

Ayu', re' taqe chih jarik wilkeeb' chu paam i molaab' kiye'jik chu paam pa'lik kiwach juuch' tz'apb'al, eh inteherik kixelek taqe ruuk' jenaj tz'uhr wilik rujeeh. Qil i ehtaal:

$$A = \{8,\ 10,\ 15\}$$

Molaab' tz'ihb'imaj kib'irel.

Ayu' inq'orjik kib'ihnaal taqe i ju'jun paam i molaab'. Qil i ehtaal:

$$B = \{rosas,\ hojas,\ frutos\}$$

Molaab' ye'ooj kehtaliil.

Ayu', re' taqe paam i molaab' kikojarik chu paam xa ajwach keh taqe i kiwii' ehtaal. Qil i ehtaal:

C =

Molaab' ma'xta paam.

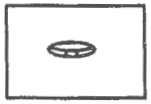
Re' molaab' wilih, ma' jenaj paam, ma'xtah chi junpech, reh rehtaal inye'jik jenaj chi k'isa sirisik eh jenaj i juuch' q'e'lik wach naah. Ehtaal reh:

$$T = \{\ \emptyset\ \}$$

Molaab' jenaj paam.

Re' molaab' wilih xajenaj tiij i chih jarik wilik chu paam. Ehtaal reh.

F =



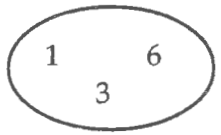
Molaab' ki'ib' paam.

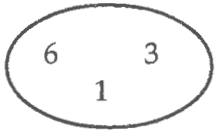
Re' molaab' wilih ki'ib' chi ju'jun wilik chu paam. Ehtaal reh:

$$T = \{Ixchel,\ Ixmukane\}$$

Molaab' keh i jenaj kiwach.

Re' taqe molab' wilih inkimol wach taqe i chih jarik til eliik kiwach, ma' k'iso'q injalaaj wii' kiwach, jenaj wach kinimaal, jenaj wach kik'ihaal, re' ehtaal inkojarik keh re' i wilih: (=). Ehtaal reh:

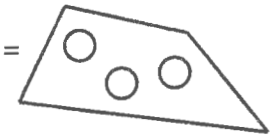
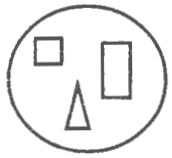
G = 

F = 

G = F

Molaab' kiwach taqe i ma' jenaj ta kiwach.

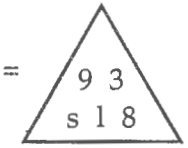
Re' molaab' wilih, reh reh kiwach taqe i chih jarik wilkeeb' chu paam, reh reh wach kika'yb'al, reh reh wach kik'ihaal, re' kehtaal inye'jik re' i wilih: (≠). Ehtaal reh.

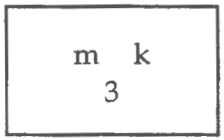
Z = 
X = 

Z ≠ X

Molaab' keh taqe i jun-eht.

Re' wilih irumol kiwach taqe i chih jarik eliik wach noq inooj eloq, jenaj wach tz'aaq, jenaj wach iruq'or, re' rehtaal intz'ihb'jik re' i wilih: . Ehtaal reh.

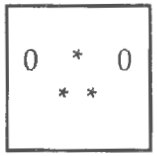
G = 

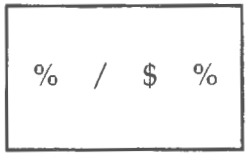
H = 

H E G

Molaab' keh i ma' jun-eht ta kiwach.

Re' wilih irumol kiwach taqe i chih jarik ma' eliik tah wach noq inooj aloq, ma' jenaj wach tz'aaq, ma' jenaj tah wach iruq'or, re' rehtaal intz'ihb'jik re' i wilih: ∉. Ehtaal reh:

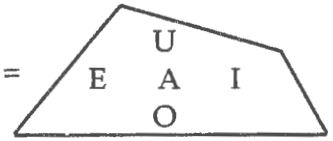
L = 

I = 

H ∉ G

Molaab' keh taqe inkiyew kiib' chi ajlanik.

Re' molaab' wilih, irumol kiwach taqe nik' nimaal i xapa' jarik, iruyew riib' chi ne' inqajlaaj oon re' taqe i chih jarik ink'uhlik kiwach noq inqajlaaj taqe.

S = 

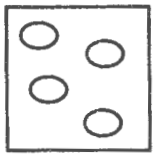
Molaab' keh taqe ma' inkiyew tah kiib' chi ajlanik.

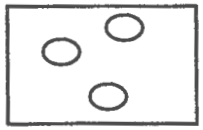
Re' molaab' wilih irumol kiwach taqe i chih jarik ma' ruyew tah riib' chi ajlanik, maj ma' ink'uhlik tah kiwach. Ehtaal reh:

$$R = \{\text{Re' taqe ch'umiil reh taxaaj}\}$$

Molaab' keh taqe jenaj wach kiwii'.

Ayu' inkimol kiib' taqe i chih jarik, eliik kiwach kuuk' taqe i wilkeeb' pan pa reh laj molaab'. Ehtaal reh:

A = 

B = 

Molaab' keh taqe ma' jenaj tah wach kiwii'.

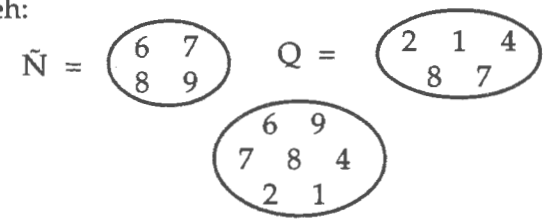
Ayu' inkimol kiib' taqe i chih jarik, ma'eliik kiwach kuuk' taqe i wilkeeb' pan pa reh laj molaab'. Ehtaal reh:

$$N = \{\text{Ho'oob' k'aq}\}$$

$$K = \{\text{B'elejeeb' chi sii'}\}$$

Rumoloriik kiwach taqe molaab'.

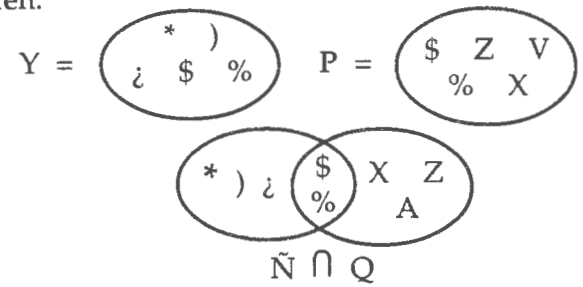
Ayu' inmolarik kiwach chi'nchel taqe i chih jarik wilkeeb' chi kipaam taqe molaab'. Ehtaal reh:



Ñ ∪ Q

Ruk'ulub'jiik kiwach molaab'.

Ayu' jenaj chik i molaab' inkorsjik wach, maj inmolarik kiwach taqe chih jarik eliik kiwach wilkeeb' chi kipaam taqe i molaab'. Ehtaal reh:



Ñ ∩ Q

Molaab'.

Re' wilih inb'ehsjik wach chu paam i na'ojb'aliil Poqomchi' reh ruye'jiik kib'ihnaal i junmohl taqe chi xapa' jarik. Ehtaal reh:

- Junmohl chi chee' inkikoj taqe ajkeem pan kikamaj.
- Junmohl chi chee' kowsb'al tik.

Tuhb'.

Tuhb' inq'orjik mohl wo' chi xapa' jarik iraaj ruq'orom qeh. Ehtaal reh:

Juntuhb' chi kok' t'uus.

Seht.

Re' wilih b'ihnaal inye'erik k'iih taqe chi chee' ruum i nimaal wach ye'aab' aha' wilkeeb' wii'. Ehtaal reh:

Junseht chi chee'.
Junseht chi kok' k'iche'.

Re' xq'orarik.

Chu paam i k'acharik, re' taqe k'achareel ku ruman chi xtihqik cho kiwach taqe q'orik mohl oon k'ih inkaaj kiq'orom chi xapa' jarik.

Ruuk' i qaq'orb'al, re' taqe q'orik inqaq'or, re' taqe: molaab', tahm, seht.

Pajoj iib'.

Chatz'ihb'aaj kib'ihnaal taqe reh reh kiwach laj molaab'.

Chatz'ihb'aaj eh chayew jino'q rehtaal i reh reh kiwach laj molaab' wilkeeb'.

Chatz'ihb'aaj jino'q ehtaal reh i molaab' inb'ehsjik wach pan na'ojb'aliil Maaya.

Re' taqe tahs huuj xikojorik tub'al iib'

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